
May 1986 No. 50
98p
sinclair user
BRITAI UTER MAGAZINE
Holy Spin-offs!
BATMAN
gets a Classic
HEWSON ZAPS BACK IN
QUAZATRON
REVIEW PLUS PRIZES
THE WRITE STUFF
We round up the latest
in word processors
BACK TO THE FUTURE
BOMBJACK
MUGSY'S REVENGE

THE WRITER



"The Best"

When it came to reviewing the best in wordprocessors for the Spectrum, Your Sinclair (Jan. 1986) said "I have no doubt that 'The Writer' will take over as the best Speccy wordprocessor."

Praise indeed. But praise we think is warranted for what one industry pundit described as "Probably the best wordprocessor I've seen for any Z80 based micro."

Just look at these professional features: up to 127 column screen display; Wordstar* compatible; Tasword II compatible; true printer spooling; user definable printer definition files (works with virtually any printer which can be interfaced to a Spectrum); pull-down menus; extensive 'help' files on non-tape versions; mail-merge (works with 'The Database' – forthcoming); print-merge; enables the definition of variables and numeric expressions in text; 48K and 128K Spectrum versions; Mouse/Joystick pointer options coming.

'The Writer' – "Simply, the best wordprocessor for the Sinclair Spectrum."

STOP PRESS: now Kempston Mouse compatible.

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SofTechnics, 12/13 Henrietta Street, Covent Garden, London WC2E 8LH.
Tel: 01-240 1422/7877. Tlx:892379.
Write for details of "The Database" and "The Spreadsheet" coming soon.
(The Writer and Artist II are available on most formats – disk, Microdrive and tape).

*Wordstar is a registered trademark of MicroPro.

THE ARTIST II



"Better than the Best"

When we launched 'The Artist' in 1985 it was reviewed as the most amazing graphics package to have appeared for the Spectrum. Indeed, it became one of those very few 'utilities' to actually get into the Gallup Chart…

But now a new graphics package is all set to knock 'The Artist' off its Number One spot – 'The Artist II.'

Artist II has been designed to be the 'best-bar-none' with features including: Icons and Pull-Down Windows; Mouse Control Options (works with four different kinds of mice); 48K and 128K Spectrum versions; same unbeaten line up of graphics features – but now with the addition of elastic-lines, elastic-circles, elastic-elipses and elastic boxes. Artist II now supports a full range of printers and enables 'dumps' in a variety of sizes. And yes, like Artist I, Artist II is still the only graphics package of its kind with a fully flexible 'cut & paste' facility for any shape of graphics.

PAGE-MAKE-UP: Artist II will also allow 'The Writer' files to be merged in and enable you to do true 'page make-up' as on much more expensive micros. Ideal for club/school magazines, broad sheets, etc, etc.

'The Artist II' – "It's bettered the best."



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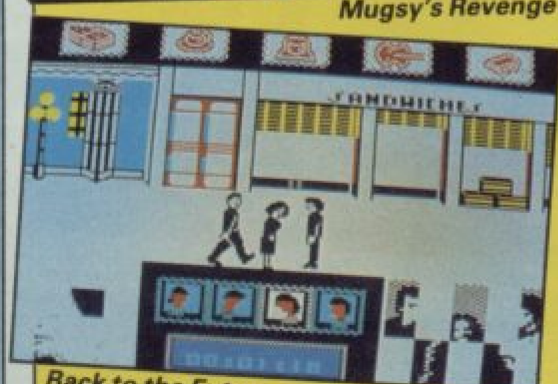
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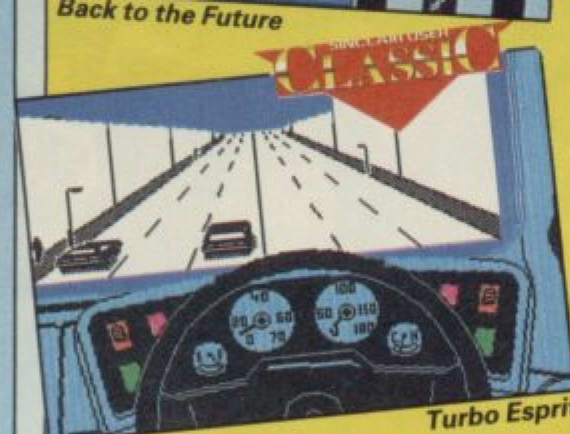


Quazatron



Mugsy's Revenge


Back to the Future



Turbo Esprit

SOFTWARE

128 SOFTWARE

ADVENTURE

UTILITIES

HARDWARE



QLINK

E · N · T · S

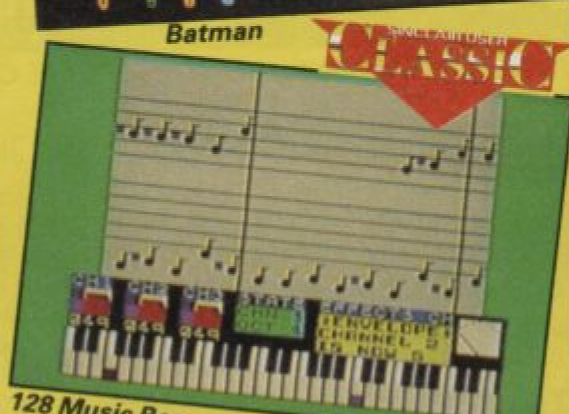


Sai Combat

Bombjack



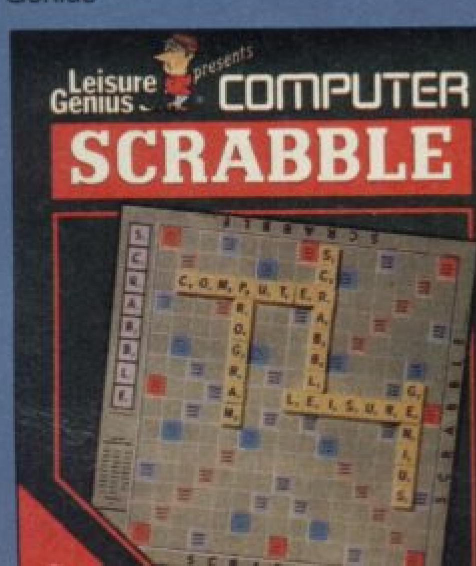

Batman



128 Music Box

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COMPETITION



REGULARS

Amstrad axes QL in Sinclair sell out

ALMOST a year of speculation over the future of the country's best known micro company, Sinclair Research, ended on April 7 with the announcement that Amstrad has bought out Sinclair's computer business for a cash of sum of just £5m.

The announcement means big changes for Sinclair with news that the ill-fated QL model is to be scrapped, along with the controversial Microdrive storage system.



First victim of the new Amstrad regime: the 'unsuccessful' QL

Instead, Amstrad looks set to introduce a new version of the Spectrum 128 before the end of this year which — in keeping with Amstrad's bundling philosophy — will feature a built-in cassette tape player.

"We will also be producing a limited number of peripherals for the Spectrum 128," said Amstrad chief Alan Sugar. "A disc drive is on the cards, it will be 3 inch.

"The cheapest of the Sinclair/Amstrad products will be £139, including VAT, and it will be a Son of Sinclair. We think that the price war situation of last year was ridiculous and don't intend to further drop the prices of any of the current Sinclair range of computers."

First details of the effective takeover of Sinclair's computer business came at the start of trading at the Stock Exchange on Monday, April 7. A statement issued by Amstrad at the Stock Exchange announced that Amstrad had purchased from Sinclair Research the worldwide rights to manufacture and market all existing and future Sinclair computers, the rights to use the Sinclair brand name and all intellectual property rights where they relate to computers and computer-related products.

The intention is that the Sinclair and Amstrad computer product lines will now evolve in parallel. The Sinclair products will concentrate very much as at present in the low-cost predominantly games computer market, while the Amstrad models will offer more sophisticated applications for the advanced home user and — with the introduction of Amstrad's much rumoured IBM PC compatible clone — the business user.

After the announcement Amstrad chairman Alan Sugar said, "Sinclair computers have dominated the entertainment market in Europe for the last two or three years, while Amstrad has seen itself as supplying machines for the more serious home computer and word-processor market. Both ranges have their own niches in the computer market.

"We are committed to taking all stocks of computers which Sinclair Research owns but I think that it can't be denied that the QL model was not successful. We will be de-stocking that product and I don't see continued production. We have a duty to maintain support for QL owners for seven years — that includes keeping a stock of parts of the model.

"Amstrad will also study the reasons why the Sinclair products have given cause for rumour of poor quality — in a lot of cases these rumours are unfounded but the Sinclair machines are complicated to use compared with the 'complete package' systems marketed by Amstrad."

"It is not a rescue deal for Sinclair Research," stressed Sir Clive. "We had some alternative offers of investment within the business as it stood but the Amstrad deal was the better option. Sinclair Research's creditors are happy with the deal."

Sinclair's Spectrum Plus and 128K computers, for the present will continue to be manufactured by the three current sub-contractors, Timex, AB Electronics and Thorn.

Immediately after the Stock Exchange announcement on Monday April 7 Amstrad's shares fell 16p to £4.72 but recovered somewhat to £4.78 after the implications of the takeover had been digested by the City.

Commented one stock broker, "The City has a good impression of Amstrad yet gets wobbles in the stomach where the name of Sinclair is concerned.

"The City appears to have taken the news in its stride — if they had been really worried they would have cut the Amstrad share price right back — that they didn't is a sign of their confidence that Amstrad is doing things right."





Clive: out Sugar: in

The sale ends months of doubt over the future of Sinclair's computer products which began with the July cash crisis, the abortive take-over plan proposed by Robert Maxwell's Pergammon subsidiary Hollis, the launch of the Spectrum 128 model before Christmas in Spain, and the sale of £10m worth of Spectrum Plus models to high street chain Dixons.

Following the sale of its computer division to Amstrad, Sinclair Research is to be dramatically reorganised. Already most of the staff at Sinclair's Cambridge headquarters have been given notice. According to one source all staff up to 'manager level' have been sacked including product manager Chris Clifton.

Sir Clive is to turn his attention to a number of separate ventures. With just five Sinclair Research employees he is to concentrate on developing innovative technologies in telecommunications and semiconductor technology.

Explained Sir Clive "Part of the package will include floating off the communications side of the business which is in Winchester, and the wafer scale business which has some initial financial backing from Barclays. We are also floating a research and development company to do contract research for a limited number of corporate clients.

"The first wafer scale products will be available next year and the first will be a large memory device with 40 megabits on a single chip."

Sinclair is also to continue with development of its Pandora portable computer incorporating a development of Sinclair's flat-screen display and Amstrad under the April 7 agreement retains an option to manufacture and market any future Sinclair computer products.

The shareholding within Sinclair Research remains the same: 80 per cent to Sir Clive, 10 per cent is held by institutional share holders and another 10 per cent is held by individuals. One Per Desk royalties will remain with Sinclair Research.

Reaction from software houses following the news of the Spectrum takeover by Amstrad remained cautious. Ocean's managing director David Ward commented, "In the short term there will probably be a better marketing drive in Europe for the Sinclair machines, but in the long term the news is not too good: Amstrad is not an R&D company and the Sinclair inventiveness will no longer be there.

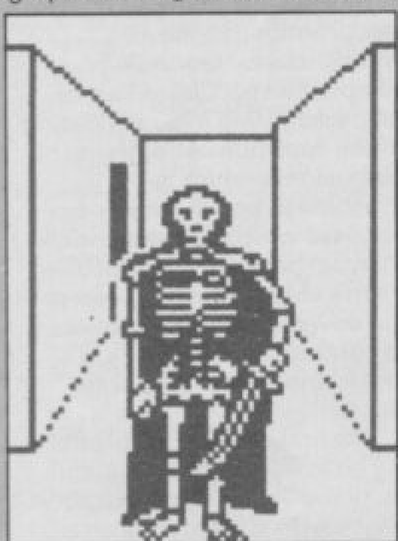
"There is a possibility that the next replacement for the Spectrum will be an Amstrad machine in a Spectrum case."

Andrew Hewson of Hewson Consultants said, "The Amstrad and Sinclair are two distinct styles of machine even if they run on the same microprocessor. In terms of development, will Amstrad bother to make use of the knowledge it's bought?"

Advanced sword play

THE SUCCESS of **Swords and Sorcery** has prompted publisher PSS to produce an advanced version of the game.

Advanced Swords and Sorcery contains the main program with improved graphics and game play. The package also contains levels one and two of the dungeons together with a detailed map, advanced players' guide, guide to monsters, book of objects, and cassette labels which can be used to identify your characters.



The game is available in two forms. If you have the old version you can buy an update for £4.95 from PSS, 452 Stoney Stanton Road, Coventry CV6 5DG. The new package can be bought from retail outlets for £14.95.

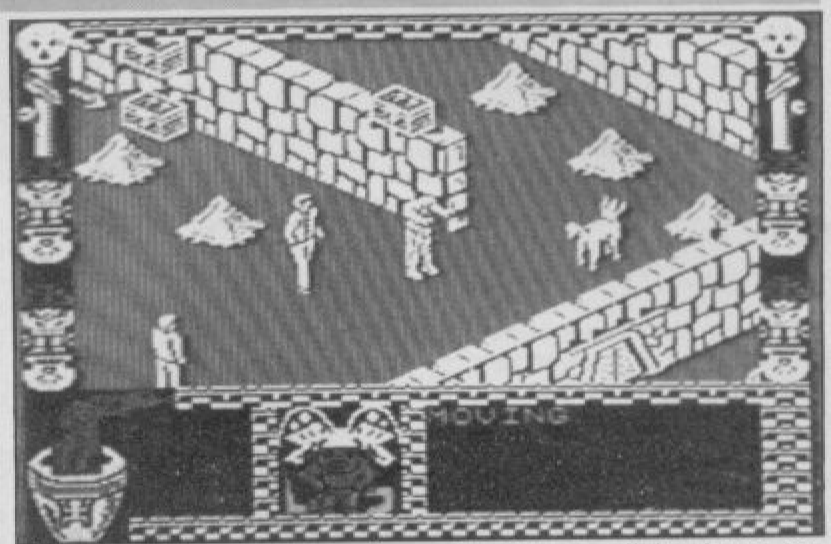
Hewson violates curse

HOT ON THE heels of the arcade spectacular **Quazatron** comes **Pyracurse,** from Hewson.

The game, which was originally entitled Sphinx, is a multi-character adventure with 3D scrolling graphics. It follows the exploits of four explorers to South America.

Pericles Pemberton-Smyth, the famous archaeologist, is missing and his daughter Daphne is trying to locate him. When last seen he was exploring the Sinu region of the Andes in search of the tomb of the Xipe Totec, an ancient god.

Some years before his disappearance Pericles had stumbled across the tomb of Totec's daughter which was guarded by the curse, 'He who violates my daughter's resting place will have his own daughter violated'.



The remaining members of the expedition are Daphne's dog; Legless O'Donnell — a British reporter — and Professor Rodger Kile from the British museum.

Hewson claims the game is different from other 3D adventures as all the characters have separate motives for being on the expedition.

The graphics are also some of the most realistic to be found on the Spectrum. The game will be available in June for £9.95.

The Archers adventure

THE SLEEPY village of Ambridge, Mark, Shula and the rest of the cast are about to make their debut on the Spectrum 48K in **The Archers,** an adventure from Mosaic Publishing.

The game is being produced by Level Nine Computing, and the complex multiple story lines are being written by William Smethurst, editor of the BBC radio programme.

He was chosen for the project because he knows more about life in the fictional village of Ambridge than any of its residents.

Following the success of **The Secret Diary of Adrian Mole,** Mosaic is planning to publish a sequel to the adventure game which will be called **The Growing Pains of Adrian Mole**. The plot is taken from Sue Townsend's second book about the spotty adolescent monster.

Adrian Mole will be published in the summer, while country and soap fans will have to wait until the autumn for **The Archers** to appear.



A Remington run-around

THE C5 electric trike business is not subject to an American takeover, despite recent reports in the press.

It has been suggested that Sir Clive was to sell off his shares to Victor Kiam, boss of Remington Products which produces the famous razor. Kiam apparently intended to launch a joint venture with Sir Clive to sell it as the Remington run-around for the humble price of $799.

Sinclair spokeswoman, Eileen Counihan, denied that any deal was about to be completed. "Kiam has received delivery of a small number of C5s and is assessing its market potential. It's too early to speculate on such a deal or even on the name which might be used to market the product."

Plans for a C10 and C15, which should look more like a car, are still being put into operation. "The research is still continuing at the Coventry plant," says Counihan.

► 10

Programmers Binary Vision

TWO members of the Electric Pencil Company, famous for **The Fourth Protocol** and **Zoids,** have split from the software house to form a new programming team called Binary Vision.

Rupert Bowater and Paul Norris claim that the split is amicable. Bowater says: "We are very happy with the way things have gone with EPC, but have slightly different ideas on a direction for the future."

Binary Vision is now working on a new project for Palace Software which will hopefully be completed for release at the next PCW Show in September. It is as yet untitled but can best be described as a tropical escapade set between the first and second world wars. Binary Vision is the team which programmed **Max Headroom**.

Alligata's Rambo repeat

THE COMMANDO theme, which Elite started with its arcade game of the same name, has been continued in **Who Dares Wins II,** from Alligata Software.

You may also find similarities between this game and **Rambo**. Armed with only an automatic rifle and five grenades you must enter enemy territory, destroy enemy troops and blitz buildings. To score really mega points, however, you must rescue prisoners.

Alligata promises "everything you'd expect in a real life combat zone, but to alert you to the dangers would disrupt the balance of the fighting machine that you've been trained to become."



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Pandora's box remains closed

THE PANDORA, Sinclair's portable computer, will not be launched this year despite an announcement made by Sir Clive at the launch of the Spectrum 128.

Sinclair Research states that the machine will not be ready until 1987, but that some pre-production models will be up and running to allow market testing later this year.

Much of the machine's specification has been finalised but, as reported in last month's *Sinclair User*, the medium used for the Pandora's mass storage memory has yet to be agreed. If, as seems likely, a CP/M operating system is to be implemented on the machine, a disc drive may be included in the package. However, Sinclair is studying the use of a new medium — the Smart Card.

The device is similar to a credit card with a program encoded on the magnetic tape surface. It can be read almost instantaneously into the computer and the programs are harder to pirate. Unfortunately, the machine would still have to contain a disc drive because the Smart Card is read-only and you cannot store your own programs on it.

Despite the extension of the launch deadline, Sinclair still aims to keep the price of its portable as low as possible. Although no firm price has been fixed it is likely that the machine will be priced below £400.

Nexus enigma

THE MYSTERY of the Nexus connection has been solved.

After many months of frantic hack work, we can reveal that Nexus the company is almost ready to launch **Nexus** the game for the Spectrum Plus.

The arcade-adventure turns you into a super journalist on the trail of drug smugglers. You must first train to be a hack before getting the dope on the gang operating the ring.

Your job will be difficult as objects like a pencil, shorthand pad and camera are not the only articles you need. You'll have to train to use your fists as deadly weapons in a special gymnasium set up for Nexus members. When you've attained some karate skills you can go after the drug peddlars.

Nexus the company has been set up by Paul Voysey and Tayo Olowu of **Shadowfire** fame, and they have been joined by Bill Delaney and Clive Bailey from Beyond Software.

Delaney and Bailey came to the *Sinclair User* offices with a portable video recorder to show a demonstration of the game. The graphics are similar to those of **Shadowfire** and **Enigma Force**.

Nexus, is based in a multi-storey tower block and characters can be ordered to perform several tasks in sequence — usually violent — using the keyboard or joystick.

A release date has not yet been fixed but Nexus indicates that it could be launched sometime in April. It will cost £9.95 and be compatible with the Spectrum 128.



A mouse in control

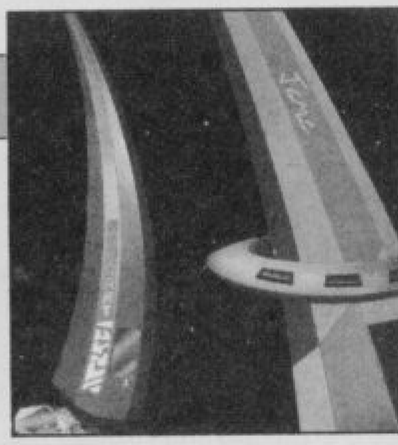
IF YOU haven't got a mouse but would like one, Nidd Valley Products can supply you with an interface to control one of these beasts using the Spectrum 48K or 128K.

The Digimouse ZX Interface supports only one mouse which can be used for freehand drawing, cursor-controlled input using icons, and the selection of options in your own programs. It will also support Kempston joystick compatible games, and a joystick can be plugged in to give you a choice of control devices.

The interface is compatible with all Spectrum graphics packages and costs £49.90 inc.

A Centronics printer interface is incorporated on another version of the interface — the Digimouse JS Interface. Nidd Valley has created an easy to use printer driver so that you can tailor the Centronics interface to suit your particular circumstances. It costs £59.90 inclusive.

Both packages can be ordered from Nidd Valley Micro Products, Stepping Stones House, Thistle Hill, Knaresborough, Yorkshire.



Winners

THE MYSTERY word to the **Cyberun** competition which appeared in the March issue of *Sinclair User* is Zebarema. The first five correct winners will each receive a copy of **Cyberun** and all the US Gold spectrum hits. The winners are: P N Terry, Andover, Hampshire; Brendan Devlin, County Tyrone, Ireland; Jonathan Hampton, Scarborough, North Yorkshire; Mark Pearce, Sheffield, South Yorkshire; Philip Bond, Barry, South Glamorgan.

The 100 runners-up each receive a copy of **Cyberun**: D Gallimore, Moore, Nr Crewe; O D Hall, Biddulph, Stoke-on-Trent; Darren Wheeldon, Darlington, County Durham; Graeme Waggott, Angus, Scotland; Stephen Salt, Oldham, Lancashire; Stephen Collins, London NW3; I Dennell, Southshields, Tyne and Wear; D I Fancourt, Bedford; Andrew Biswell, Chessington, Surrey; Michael Wrench, Northwich, Cheshire; Robert Davies, Merthyr Tydfil, Mid Glamorgan; J A Ball, Bury St Edmunds, Suffolk; Mr A Mends, Draycott, Derbyshire; Troy Moore, Liden, Swindon; Mark Becke, Eastleigh, Hampshire; Darren Cutler, Birmingham; S Smith, Darenth, Kent; Mark Franks, Sutton Coldfield, West Midlands; Richard Harrison, Droitwich, Worcester; G C Lawson, Doncaster, South Yorkshire; Marc Whittinghall, Poole, Dorset; Wellington Tsang, London W10; Paul Johnson, East Grinstead, Sussex; Nicholas Tyrrell, Birkenhead, Merseyside; Noel Griffiths, Newport, Gwent; Leigh Holmes, Loughborough, Leicestershire; Greg Cornwall, Castle Bromwich; Anthony March, Hessle, North Humberside; Niall Watts, Uttoxeter, Staffordshire; James Rowlett, Nr Crewe, Cheshire; Neil Robinson, Birchwood, Lincolnshire; Cormac Purtill, Camberley, Surrey; S Ellwood, Deeside, Clywd; Barjan Van Hulten, Holland; Mattias Kuarnheden, Sweden; Simon Burrows, Enfield, Middlesex; Mark Cuthbertson, Bury, Lancs; Barry Last, Waltham Abbey, Essex; Jordi Robinson, North Anston, Near Sheffield; G C Isted, Haywards Heath, Sussex; H Collings, Aldershot, Hants, Paul Hacking, Fulwood, Lancs; Peter Meloy, Tunley, Avon; David Conway, Beaconsfield, Bucks; Nigel Copas, Romford, Essex; E Jones, Tywyn, Gwynedd; Christopher Bailey, Bourne End, Bucks; C Green, Reading, Berks; A G Masters, Buxton, Derbyshire; Andrew Elmore, Ipswich, Suffolk; Paul Hamilton, Bradford, West Yorkshire; Mark Tucker, Harrow, Middlesex; Charles Lomas, Bank House, Manchester; Mark Shaw, Solihull; R Cavill, Dewsbury, West Yorkshire; Ciaran Byrne, Ashbourne, County Meath; David Wilson, Sunderland, Tyne and Wear; Jeffrey Butt, Lichfield, Staffordshire; Matthew Pink, Harpenden, Herts; B Dawber, Skegness, Lincs; Andrew Walters, Allestree, Derby; Jonathan Lambeth, Wembley Park, Middlesex; Ivan Monk, Wednesfield, Wolverhampton; Iain Dolley, Westbury-on-Trym, Bristol; Neil Deeley, Chelston, Torquay; Jason Mann, Borehamwood, Herts; Peter Tan, Malaysia; Jim Naff, Thirsk, North Yorkshire; Joe Baxter, Redmarley, Gloucester; Peter Downing, Princes Risborough, Bucks; Steven Roberts, Wigan, Lancs; Lee Osbourne, Great Barr, Birmingham; David Wood, Penarth, South Glamorgan; Jonathan Camerch, Macclesfield, Cheshire; Ian Lewis, Great Sankey, Warrington; G Dalton, Paisley, Renfrewshire; Kenneth Ross, UAW; William Rowe, Littlemill, Nairn; Ingar Fuglevaae, Norway; Nicholas Hopkins, Kemnay, Aberdeenshire; Tomasz Skurtweski, Poland; K Marston, Wimbourne, Dorset; Stephen Blackledge, Kendal, Cumbria; David Gibson, Near Brackley, Northants; Mark Dennett, Colne, Lancs; Craig Ball, Teignmouth, Devon; Robert Chaffer, Sheffield; Martin Bridges, Huddersfield, West Yorkshire; Stephen Williams, Luton, Beds; Mark Littlewood, Kendal, Cumbria; Graham Basten, Preston, Lancs; Jonathan Whittingham, Great Boughton, Chester; Vijay Vadgama, Walsall, West Midlands; Richard Shaw, Coohampton, Southampton; Petta Palmaki, Finland; Bill Walsh, Waterford City, Ireland; John Hay, Sutherland, Scotland; Yersen Geurts, The Netherlands; Martin Simnmons, Maldon, Essex; C M Plumley, Bourne, Lincolnshire.

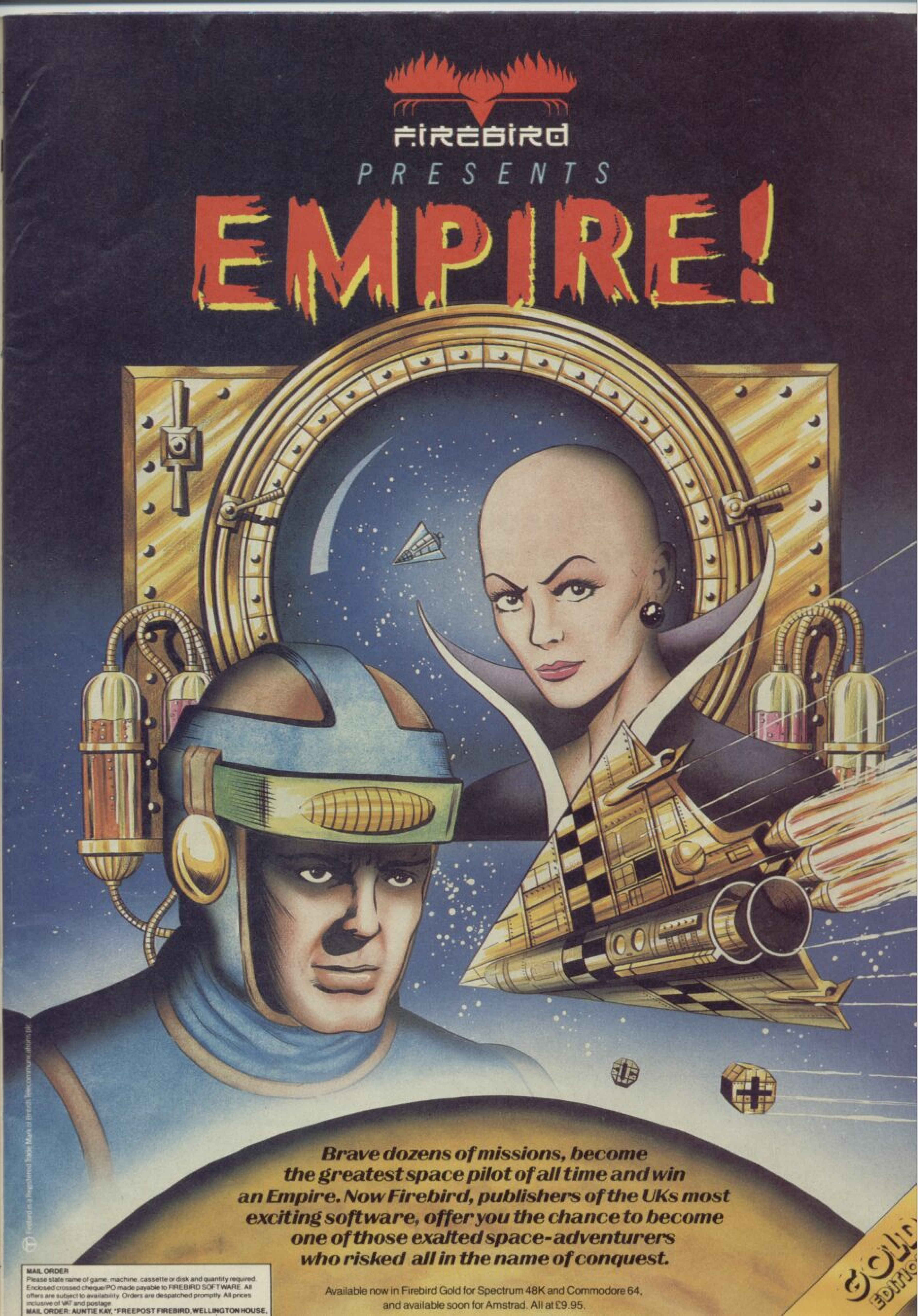
Surf's up



THE CORRECT solution to the **Surfchamp** competition, which appeared in the March issue of *Sinclair User* is 1B, 2B, 3C, 4D, 5A. Congratulations to Patrick Wilson of Braumon in Devon who has won the first prize of a customised surfboard.

There were five second prizes of sweatshirts and the winners are: Paul Cook, Filton, Bristol; David Williams, Connah's Quay, Clwyd; S P Coombes, Derriford, Plymouth; Geoff Marshall, Dundee, Scotland; Amir Dekel, Israel.

The following ten runners-up each receive a T-shirt: J Taylor, Havant, Hampshire; A P Morris, Windsor, Berkshire; Simon Ward, St Lawrence, Jersey; Simon Brewer, Maidstone, Kent; Jeremy Hurn, Falmouth, Cornwall; Joel Toppng, Bideford, North Devon; Martin Harris, Billinge, Lancashire; Victor Leonard, Sligo, Ireland; A Rathbone, Leamington Spa, Warwickshire; Guy Roppa, Wimbledon, London SW19.

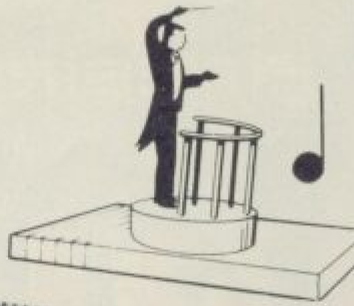

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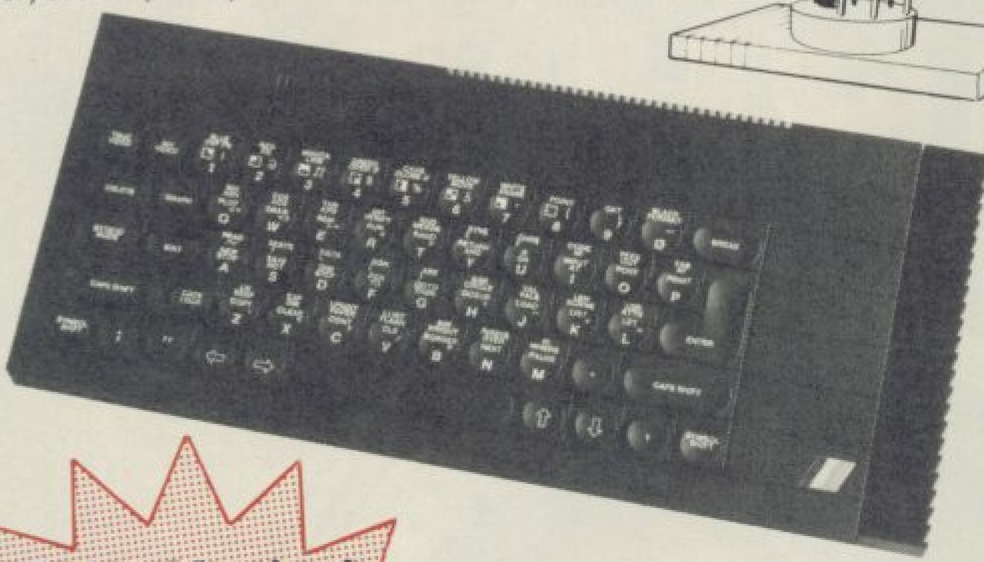
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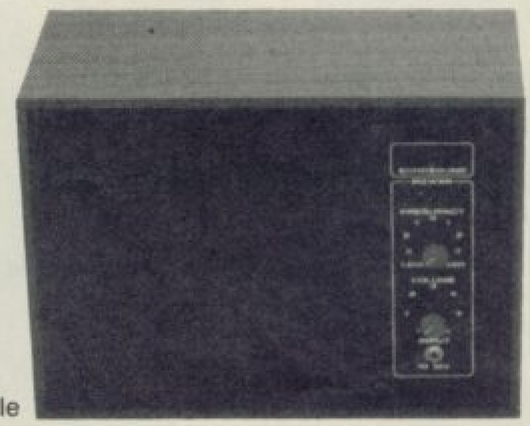
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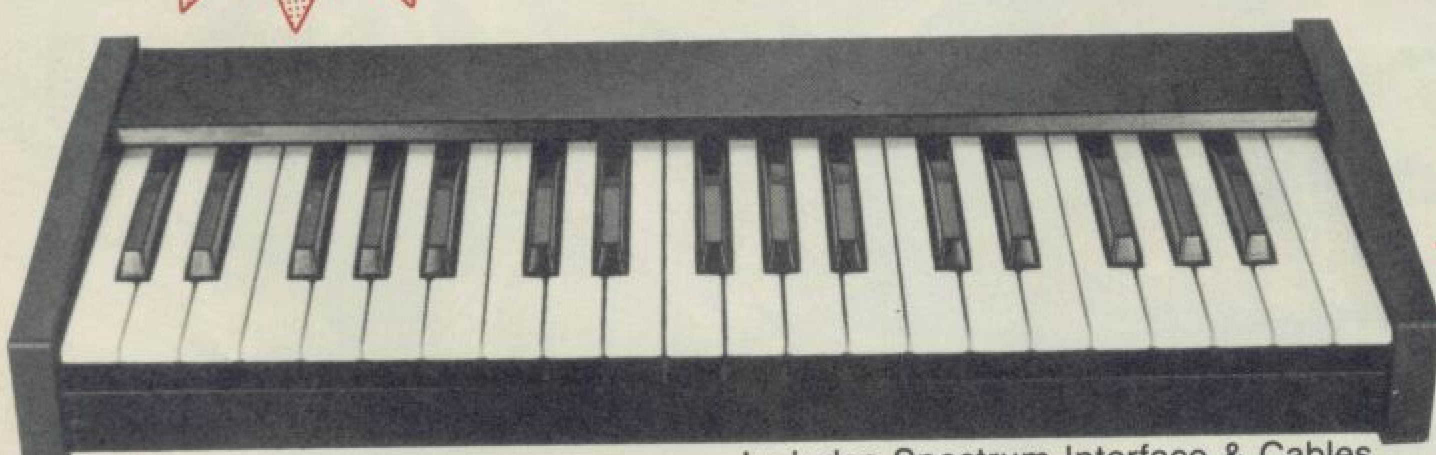
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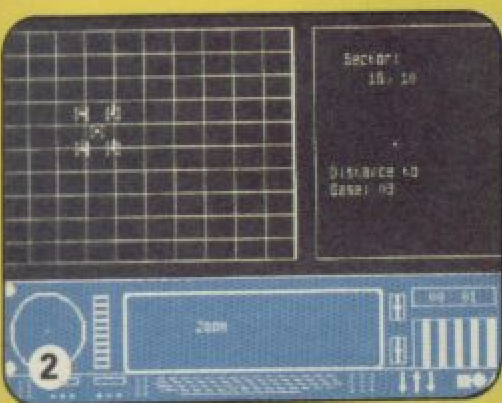
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1



2



3



4



5

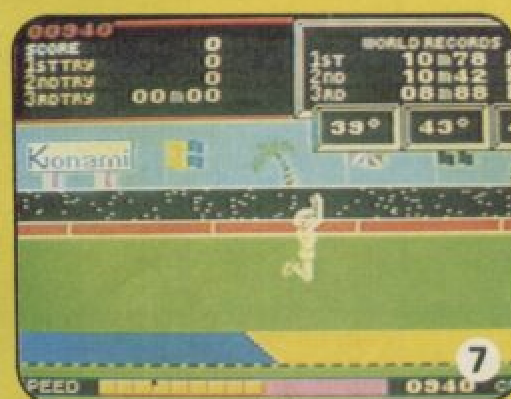
1	▲	MOVIE	IMAGINE
2		SKYFOX	ARIOLASOFT
3		FA CUP FOOTBALL	VIRGIN
4	▽	WINTER GAMES	EPYX/US GOLD
5	▲	BARRY McGUIGANS BOXING	ACTIVISION
6		DEVIL'S CROWN	MASTERTRONIC
7	▲	HYPERSPORTS	IMAGINE
8	▽	COMMANDO	ELITE
9		INCREDIBLE SHRINKING FIREMAN	MASTERTRONIC
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11	▽	SPELLBOUND	MASTERTRONIC
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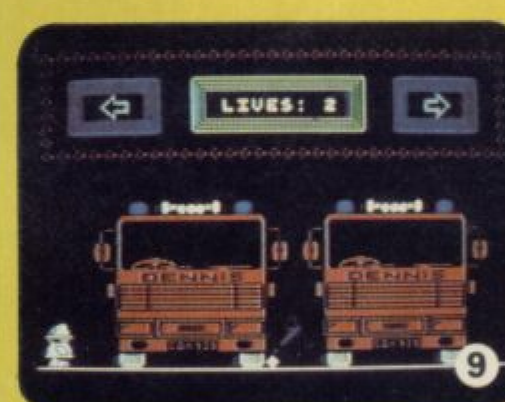
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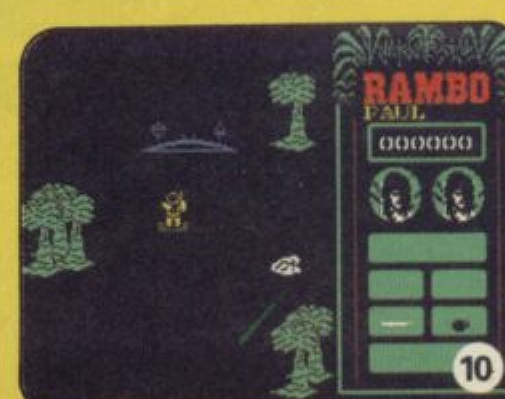
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Parents join in backlash

I'M AFRAID that I really must agree with all those who have already written to express their concern regarding the content of your magazine.

I certainly have no complaints as far as presentation goes, but the heavy emphasis on games is worrying.

At a time when many parents are frustrated because their children seem to be a generation of games players, rather than the future technological adepts that were hoped for, shouldn't the micro press be going out of its way to allay those fears?

The energy and enthusiasm that many young people put into hacking into games and telecommunications networks could be redirected through magazines such as yours towards the development of sound programming techniques, and a more complete understanding of computer systems.

I am sure that this could be achieved without endangering the appeal of the magazine to young people.

So please, let's have more pages devoted to programming skills.

Laurence Scotford,
Eastbourne

PS. I'd like to add to the recent comments on OCP's **Blast** compiler. I purchased this utility just before Christmas and have yet to use it successfully. Considering that I paid £25 for it, I find the program's deficiencies inexcusable.

● *There is still a large part of* Sinclair User *devoted to areas other than games. The real difference in February and March is the brighter presentation of the games reviews and contents page, which disguises the fact that we have QLink, Hewson, Sinclair Surgery and the rest still lurking within the magazine.*

Another recent innovation is more explanation on the Program Printout listings. Do you still want more on the programming side . . .?

I WAS just reading through my son's February *Sinclair User* when I saw the letter from David Williams about *Sinclair User*'s young image and felt I must drop you a line.

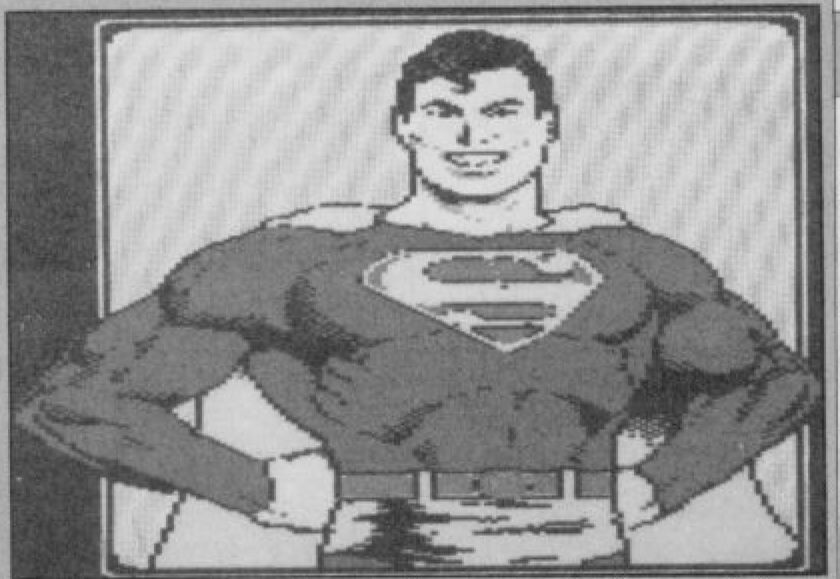
As a recent owner of a Spectrum 48K, my ten-year-old son, of course, plays lots of games on it, but I would like to spark an interest in programming in him. All the magazines I've read seem to think everyone knows everything about programming, but a lot of younger readers only know what the manual with the computer tells them, and how to load games.

If you could spare a small column each month just for beginners, explaining a certain aspect with a short interesting program, incorporating that aspect, it would make computing more interesting.

It's all very well learning from school but isn't it typical that children learn, and take more notice from a magazine?

P E Moynihan,
Chester

● *Yes it seems programming is in vogue . . . and what's this . . .?*



Scoobies galore

GREMLIN has highlighted the most common ailment of the British software industry, and still there's no sign of anyone trying to solve the problem of delayed product.

To be fair, awarding 'Scoobies' to just a few software houses for hyping games before they are ready — in some cases whole seasons before they are ready — belies the fact that every major software producer is guilty of over-optimistic launch scheduling.

And *Sinclair User* still falls for it every time. How many games have been previewed or given competition space and have still never seen the light of day?

Immediately springing to mind are Beyond's **Superman** — is it out yet? — and Melbourne House's **Asterix**. Both of these were in issues which I saw before Christmas.

But that is a minor point. My main question is: WHY DO THEY DO IT? Surely advertising in a magazine such as yours cannot be so cheap as to make it worth a company's while, filling it with colour ads for a product which, by the time it hits the shops, is as stale as month-old bread.

And do TV series licences come so easily that they can afford to waste a top-rated program like **Street Hawk?** Every businessman knows that to make profits you must set and achieve your deadlines for getting the product on the street.

And then they complain that the software industry's tough and it's piracy that is forcing them out of business. My heart bleeds for them. . .

A T Jameson,
Letchworth

●*Software houses inform us that programmers are the most optimistic breed around. It seems that if you take the date they first give you and revise it backwards three months, add on time for testing and for re-running the expensive packaging because certain promises about game features turned into compromises. . . and then some. . . you have a chance — just a chance — of getting a game out before 1990. Gremlin has more views on page 98.*

Games and a whole lot more

WHEN I read David William's letter — February — my gut reaction was to agree with his remarks and to throw in a few more about low standards everywhere. Luckily I voiced my thoughts outloud, within earshot of my wife who reminded me that I claimed to be a 'young' 43. So, in an effort to be constructive, some brief thoughts:

1. Yes there is a lot of games coverage and dialogue aimed at youngsters, but if that helps to sell enough magazines to keep it in circulation so be it.

2. These youngsters can be encouraged to use their grey matter if the presentation is right. This is the challenge a good magazine should be taking up. The machine code articles were excellent and more important useful. More of this type of article I suggest.

3. Computers cannot be considered in isolation, they are part of the real world and articles presenting them in this context would be welcome, for example, does anyone use their Spectrum to control their train set (and how is it done?), has anyone out there ever written an unusual program that has helped someone in some way?

4. Could you put in news regarding the latest developments in computing, not at home computing level but at the frontier of hardware and software research?

5. Artificial intelligence is the next big development in computing — why not articles on this aspect as applied to the Spectrum?

To summarise, all the games-playing youngsters who buy *Sinclair User* for its games content are potential serious users if the right articles are imaginatively written. If they can be stimulated to think by regular serious articles on some aspect of computer usage that will be of interest, I for one will continue to be a regular reader.

Roy Read,
Wimbourne,
Dorset

Opening the Ed's eyes

WELL DONE *Sinclair User*! When I opened your February issue, I thought I'd bought the wrong magazine.

Then it hit me, the Ed is no longer colour blind. I agree with Andrew Wood of Nottingham, the contents page is a great improvement.

Who are these people to say that it's a child's comic? Anyway I think your magazine needs more Zapchat — with more Pokes etc — more Program Printout, someone to review the Top 30, more competitions and, every six months or so, '*Sinclair User* Awards' where you get the readers to nominate their top 10-20 games.

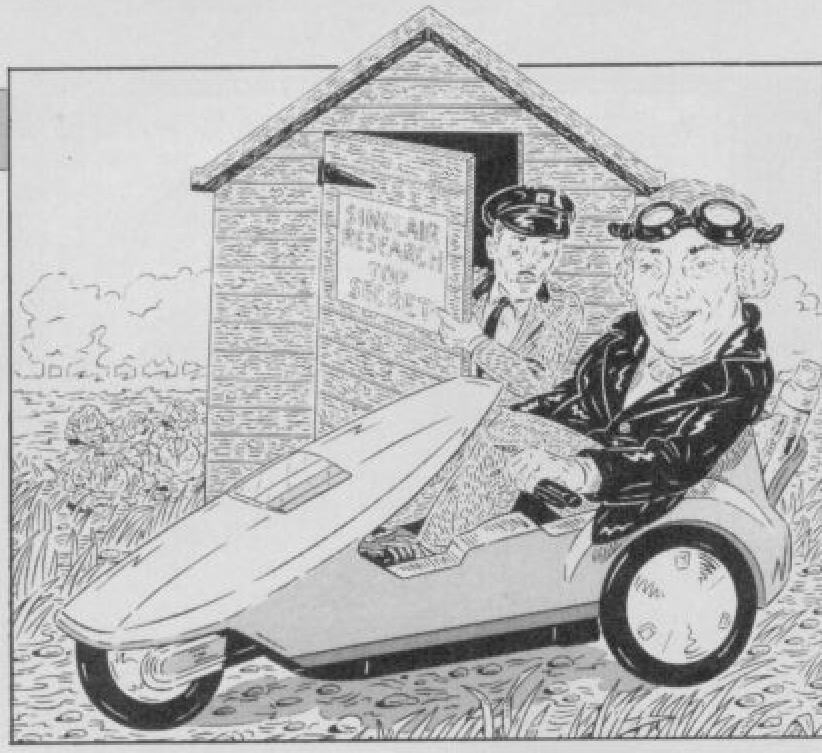
Lastly, a big thank you for your excellent magazine. It's the best thing since the ZX80.

Barry Drinkwater,
Carlisle

● *Best thing since what? This latest bunch of colour spreads has left the Ed colour blind again, but thanks for the sentiments.*

▶ 16

15 ◄



Mirth or madness?

YOU CANNOT be serious! I'm thinking the C5 Microlite article — April issue — is a piece of April Fool mirth.

Ye Gods, I hope so. Could it be and order from the Japanese airforce to give prospective Kamikaze pilots on-the-job training? No, come to think of it, a standard C5 in heavy traffic would do the job quite as well.

Talk about pigs flying, now it's plastic pigs flying! And believe me, I know from experience as I own the unique, customised C5 — NEV 26G — which I use for promotions.

Strangely enough, a friend who is an aerobatic pilot, went for a spin in my C5 and said it was like a cross between a Tiger Moth and a sailing dinghy.

Maybe someone at Sinclair heard him and took him literally. In which case, what next: The QL 2 mini-submarine? or maybe the ZX125 Intercity run-about that gets you there?

Perhaps someone can persuade the Bald One to de-bug the 128 first . . . or is that what the left-hand drive Euro-Spectrums were for?

Nev Fadries
Ashton-Under-Lyme

● *Sadly we hear the new airborne C5 may now never get off the ground. The polypropelene body was struggling to stand up to the necessary stress tolerances, and the elastic band was subject to unacceptable inflexibility at altitudes of over 5,000 feet.*

Rumours that a Japanese consortium may be bidding for the work so far undertaken are now discounted.

Mail order misery

WHAT HAS happened to the mail order business? It is not so very long ago that when buying by mail order you could confidently expect your purchase to be with you in a matter of three or four days. Nowadays, the introduction of the 'allow 28 days for delivery' stipulation seems to have provided a ready-made excuse for a deplorable departure from the sort of service that can, and ought, to be provided.

In far too many instances, having sent off your order, you wait . . . and wait . . . and wait. Much of the enthusiasm leading up to the decision to purchase has been forgotten by the time your purchase eventually arrives.

When an order has been sent off through the post, it is desirable to know, as soon as possible, that it has been safely received. Regrettably, letters do go astray, and it is most unreasonable to be expected to wait up to 28 days without receiving the goods, or at least a letter of acknowledgement, wondering as the days go by whether or not the order has been mislaid.

Why is the 28 day stipulation necessary? If an advertiser has in stock the goods he has advertised, they could, and indeed should, be on the way within 24 hours. If he is temporarily out of stock, he should inform the prospective purchaser accordingly, offering a prompt refund if the purchaser so desires. It could be made clear that if payment is by cheque, then it may be necessary to clear the cheque before meeting the order, but this only adds eight days.

J L Phillips,
Blandford

● *Who does give the best mail order service? Let us know and we'll name the guilty parties.*

Impossible upgrade

IN YOUR reply to K Pridmore's letter — April issue — you state that a 128 upgrade kit would be 'impractical and expensive'. But the Video Vault advertisement, in the same issue, advises readers to 'watch this space' for details of just such a kit. Is this advertisement hype, or do they know something you don't?

J R Beavis,
Bishop's Stortford

● *You've got the wrong end of the stick. For £39.95 Video Vault will fit your Spectrum with 80K of useable memory — not 128K — and the kit does not include any other Spectrum 128 features. Video Vault agrees with us that a 128K upgrade is out of the question.*

Jeans and sweatshirts?

I OPENED my copy of this month's *Sinclair User* this afternoon, and what do I find? Only a letter from a woman claiming that her son was getting funny ideas over the **Legend of the Amazon Women** advert.

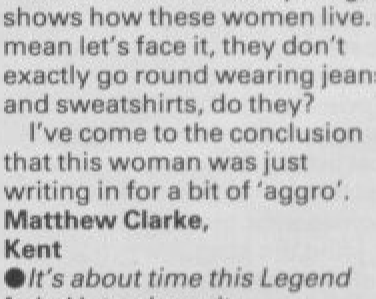
It isn't obscene or anything, it shows how these women live. I mean let's face it, they don't exactly go round wearing jeans and sweatshirts, do they?

I've come to the conclusion that this woman was just writing in for a bit of 'aggro'.

Matthew Clarke,
Kent

● *It's about time this Legend faded into obscurity.*

Piracy in a nutshell



I AM writing to ask why do people copy software? All it does is put software companies out of business because no-one buys their product. In the end no-one will bother to make and sell software. This will mean an end to a major part of the computer industry and will increase unemployment.

A worried person or
David Shearman, Portsmouth

PS: your mag is cool.

► 18

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16 ◄

The Classic choice

WITH REGARD to Mr J Tovey's letter on Classic games in the February issue, I would like to echo the editor's comments on the matter.

What Mr Tovey obviously fails to appreciate is that people's tastes differ. My view is that a game which is awarded five stars or a Classic rating is certainly worth taking a look at, but that does not mean I will rush out and buy it simply because it has got give stars.

If Classics were limited to one arcade and one adventure it would make reviewing the other titles of the month virtually pointless, as you are suggesting that only two games a month get five stars. This is stupid as there could be five games each as good as the other and each deserving five stars. If the reviewers had to decide on which one game they were going to bestow a Classic award on, the magazine might never get printed.

On a lighter note, the new format *Sinclair User* is fantastic. The double-page game reviews



with more colour shots are far better than short reviews with one picture.

My only suggestions are that Gordo should expand to, say, two pages of hints, and that your Software Directory also include the month — or at least year — that it was reviewed, as some of the older five star games simply would not be able to stand up on their own at full price.

Peter Craven,
Blairgowrie

● *Gordo expanding! Unthinkable!*

The Software Directory is no longer with us but there's a complete comprehensive guide to Spectrum software on the front cover of our marvellous June issue.

Threat to text adventures

HAVING read Richard Price's comments on text adventures on page 71 of your April issue, I find myself in total agreement with him.

The situation regarding what is, or is not, a viable product is constantly and rapidly changing, and it is to my great disapointment that text adventures may fall victim to new programming techniques.

I do enjoy a graphics adventure, but would rather play a text-only game with a well-designed parser. Deep descriptions and a variety of locations, coupled with easy manipulation of objects, does, I think, add much more interest than intrusive graphics. Gilsoft has a very elegant solution in adventures like **Madcap Manor** and this may offer some hope for the ageing text adventure.

Two final points. Is Gordo's two-page spread a permanent fixture? I hope so. Secondly is Gilsoft planning to release a text compressor for its adventure system?

D M Plaffs,
Bradway

Cheated Elitist

I MUST complain about the treatment by Firebird of genuine money paying customers. I am, of course, referring to Firebird's **Elite** and the abandoning of the **Elite** world championships and the software prize.

I have not yet reached Thargoid space, even after a month of constant pirate killing without using any dishonest tactics — tactics which I have just learned about in Duncan Wills' letter in March's Zapchat.

This isn't sour grapes on my part — my enjoyment of this superb game remains intact. It's the amount of hours I had to put in because of the deadline, which is now irrelevant. Maybe Firebird should have spent more time making the program safe from the dishonest games players of this world, and less on the Lenslok system.

I was also disappointed in there being no mission included in attaining the Elite rank.

Thomas Hanlon,
Edinburgh

Lonely ROMs

I AM 15 years old and own a 48K Spectrum. I would like to hear from readers interested in arcade and adventure games.
Paul Smith,
136 Commonfield Road,
Woodchurch,
Birkenhead,
Merseyside L49 7LP

I AM a 14-year-old boy and would like to write and exchange programs and hints with Spectrum owners from all over the world.
Vidar Vassli,
Hoelsand,
6600 Sunndalsøra,
Norway

I AM 12 years old. I have got a Spectrum 48K and would like a penfriend with whom I could swap hints and Pokes.
William Markham,
Aldro School,
Shackleford,
Godalming,
Surrey GU8 6AS

I AM a 17-year-old boy and own a Spectrum. I would like to swap programs, games, Pokes and ideas with Spectrum owners from anywhere in the world.
Adar Weidman,
Melchet 59,
Tel Aviv, 64287,
Israel

HELLO Spectrum fanatics. I am a 21-year-old Danish boy who would like to exchange experiences and programs with other users. I also have plans to start a club where Pokes can be exchanged.
Jimmi Nielsen,
Vestergaardsvej 40 Stv,
2600 Glostrup,
Denmark

I AM an Italian boy with a 48K Spectrum and lots of games. I would like a male penfriend to swap Pokes, maps and tips with.
Tomada Guiliano,
Via Salcano 15/1
33100 Udine,
Italy

I AM a 12 year old. I own a 48K Spectrum and would like a foreign boy penpal to swap games and hints with.
Jennifer Windel,
Tahquamenon,
Megs Lane,
Buckley, Clwyd,
Wales, CH7 2AE

I'M a 17-year-old boy from Saudi Arabia and I own a 48K Spectrum. I would like to exchange programs with anybody who has a Spectrum.
Mohammed Yousef A Rahim,
PO Box 9110,
Jeddah 21413,
Saudi Arabia

Pleased purchaser

HAVING recently purchased a Spectrum 128 I was pleased to see the 128 section in the April issue. With the amount of games being released for the computer your reviews gave a good and comprehensive view, and has certainly helped me in my future software choices. I hope this new section can expand and form the best 128 review magazine around.

J Steele-Mills,
Bognor Regis

● *I hoped so too but it appears not, see below . . .*

Cheers for conversions

I AM an extremely proud owner of a Spectrum 128 and thoroughly enjoyed the round-up of software in your last offering (April issue. However, I feel you were rather unjust on many of the software houses who had responded so quickly to the problems of converting games for the 128.

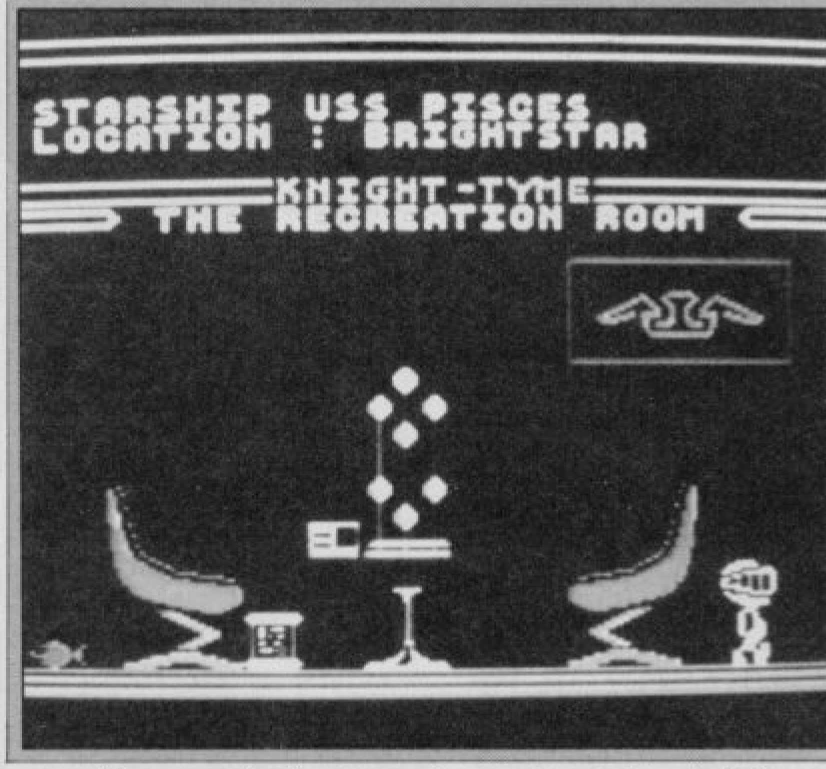
While Mastertronic had started from scratch, the other software houses had at least got products ready to go — who knows when we impoverished owners will see, and hear, the marvels of **Knight Tyme?** — at least there's a whole batch of other games ready to start our 48K friends turning at least light green with envy.

Your very own Andrew Hewson highlighted the problems these software houses faced when deciding whether to commit themselves to producing software for the 128. Many more could have easily gone the way of Elite and those awful Spanish version problems.

So let's have a cheer for those who not only got it right but got it out.

Ben Witherspoon,
Maidstone

● *Hooray*



Incompatible collection

AFTER owning a Spectrum 128 for four weeks, I have found a few incompatible 48K games:
Barry McGuigan's World Boxing (Activision)
Hacker (Activision)
Elite (Firebird)
Skyfox (Ariolasoft)
Gyroscope (Melbourne House).
Gyroscope is not completely incompatible — only if a Kempston interface is connected. I have also encountered slight problems with **Robin of the Wood**, but fortunately there is soon to be a 128 version.

If any other readers have found problems of this nature, please write in to inform other 128 users before we waste our money. Apart from these hitches, I have found the 128 to be a good purchase, with tremendous potential.

Robert Williams,
Farnworth,
Nr Bolton

● *We have compiled a list of 128 incompatibilities ourselves. See the news story on page 7 for more details.*

ZAPCHAT

Keep those tips, hints and Pokes rolling in!

Terrormolinos

IN THE MARCH issue, David Starkiss claims to be the first person to complete **Terrormolinos**.

I finished the game on November 1 with a score of 100 per cent. And I did it in 252 moves.

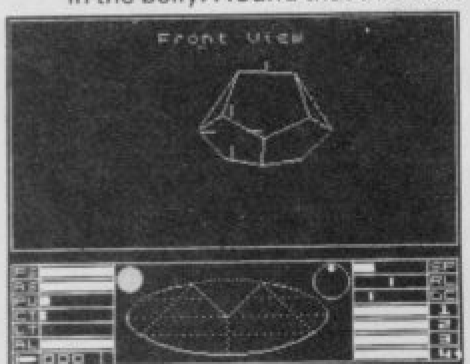
Does anyone know the endless lives code for **Commando**?

David Batson, Northfield, Birmingham

Elite

COULD SOMEONE please tell me how to save my position in **Elite**? Every time I load the game I get to Dangerous and then have to pull the plug.

When tangling with Thargoids they will nearly always come at you vertically and bank at 90 degrees. When they pull up you can shoot them in the belly. I found that this was



the most effective way of killing them.

If you would like to make money quickly go to Retort and buy as many tons of liquor or wines as possible. Then go to Quixor, sell your cargo, and buy computers. Keep doing this run until you can afford a large cargo bay, then keep on running back and forth.

Daniel Baker, Bury St Edmonds, Suffolk

IN FIREBIRD'S **Elite** I have equipped myself with a military laser, an ECM system, an energy bomb, four missiles and have hyperspaced to a planet. Not unusual I hear your cry. But when I had finished hyperspace procedure six Thargoids came at me.

I fired an energy bomb but that didn't cure the problem, I then released my four missiles only to find the Thargoids had an ECM system. I was killed in seconds so please, please, can somebody help?

Nik Rice, Braunton, North Devon



Mikie

HERE ARE some tips for **Mikie** and **Roller Coaster**.

To get a bonus on each screen in Imagine's **Mikie**, do the following:

In the classroom get all the hearts on the screen and go to the desk. Go to the middle of the room and shout three times. A clown should appear giving you 1000 points. The hall sometimes has a board on the wall — shout at this three times for a bonus.

In the locker room, go to the machine at the second junction across and, once again, shout three times. In the canteen go to the middle hole at the top of the screen and shout three times. In the gym go to the stereo on the left, then move into the middle and shout three times.

On Elite's **Roller Coaster**, go to the screen at the right of your starting point and press key three. You lose a life but the game slows down until you press key three again.

Steven Irving, Carlisle, Cumbria

Cauldron

THIS IS where the ingredients in Palace Software's **Cauldron** are situated: red door — molten lava; blue door — wing of bat, splintered bone; purple door — hemlock root, juice of toad, eye of newt.

When those have been collected get the cauldron in the house to boil, then go through the green door. Go to the end of the maze where the pumpkins cannot kill you. All you have to do is retain your broomstick.

When I completed the game, the following message appeared, 'Thou hast completed Cauldron with a score of 34,920. The Pumpkin is dead, long live the Pumpkin.'

Anthony O'Leary, Cork, Ireland

iD

I CLAIM to be the first person to complete **iD** after playing for only a few hours. I scored 99 per cent and found out what **iD** was, is and will be.

Congratulations to Nu Wave on a brilliant piece of programming. I thoroughly enjoyed it.

Mark Bublik, Stockport, Cheshire

● *Thanks for sending us your solution, Mark. We checked it with CRL, and though you've completed the game you bypassed five objects that iD was. However, we are not printing your answers as that would spoil the game for everyone else*

Barry McGuigan

I CLAIM to be the first person to complete Activision's **Barry McGuigan World Championship Boxing.**

On March 19 I fought for five hours with Pretty Boy Snyder, Jack Iron Orr, Rockin' Jo Barlow, and finally, Barry himself.

Karl Jeffery, Colchester, Essex

Zoids

I HAVE become Zoidzilla in Martech's **Zoids** and have come across a bug and an extra zoid.

When I became Zoidzilla, and whilst wandering round the cities looking for Redhorn and blasting city domes, I came across another piece of Zoidzilla. The game then crashed when I picked it up.

When you become a Tankzoid, the next zoid — instead of being Great Gorgon as is stated in the instructions — is a weird zoid called a Martechzoid. You become Great Gorgon after that.

Why did Martech put an extra zoid in the game?

Marcus, Moor Farm, Hereford



Spellbound

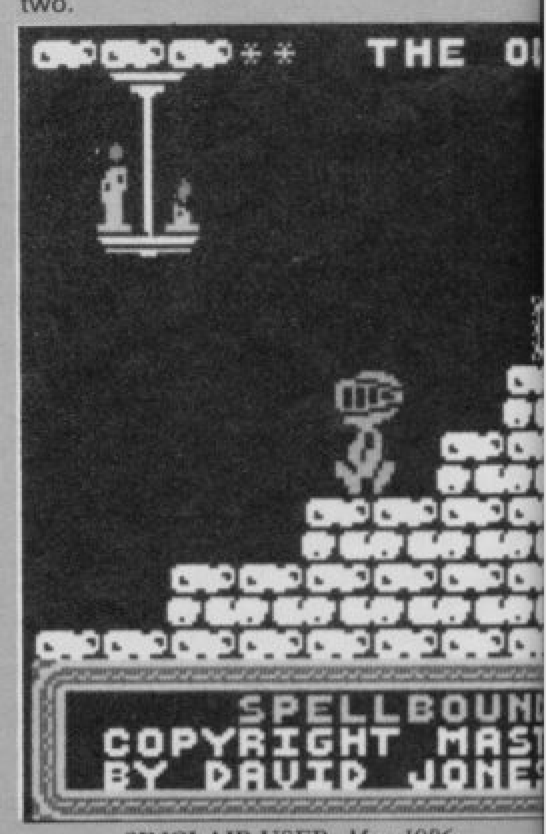
I HAVE some tips for **Spellbound.** But first I would like to tell Robert Lilley — April issue — that I finished **Monty on the Run** before Christmas with a black and white TV! As for Neil Porter who asked for help with **Spellbound** — here it is.

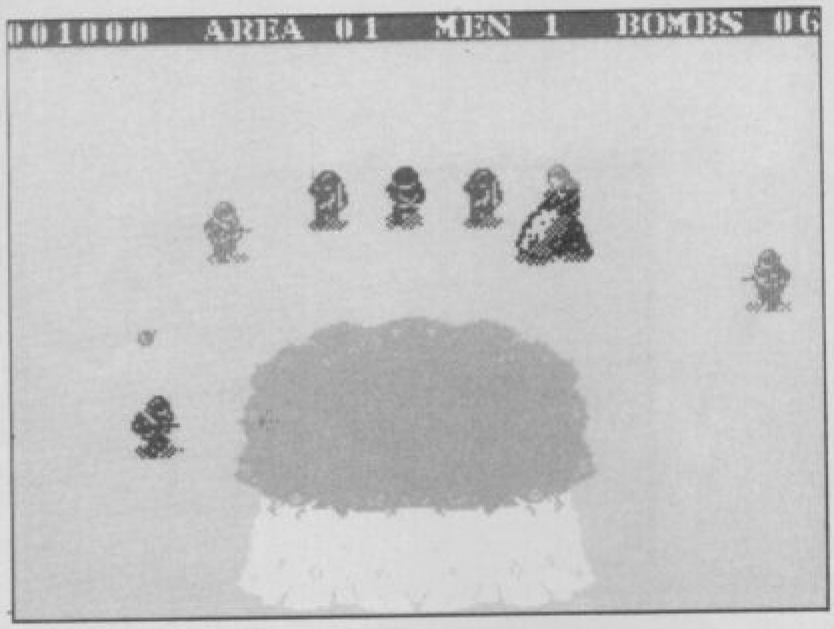
Use James Stallwood's tips — April issue — to keep yourself and the other characters alive, including Orik the Cleric on level two

Give the Miolnir to Thor in the lift and command him to help. You will now be able to move the lift to the basement and ground floor. Get the shield from the ground floor and the candle from level three and go to the roof where there is a four-leaf clover — then cast the spell CANDELABRIUM ILLUMINATIS.

The candle will now be lit and you can place it in the dark room in level three without the danger of dying. Now drop the glowing bottle and release the Banshee. Get the power pong plant from the basement and the red herring from level three and cast FUMATICUS PROTECTIUM — you will now be unaffected by the gas which can be found on level one.

Now command Thor to help on level four in the room with the wall in it — he will crumble a wall somewhere else in his attempt to crumble this one. Give Elrond the trumpet from level one and command him to help in the wall room on level two. He will blow down the wall and you will be able to roam freely along the length of level two.





Commando

IN REPLY to Matthew Sellen's letter — April issue — asking for help with **Commando**, you have to kill all the soldiers as they come out of the gate in order to go onto the next sector.

Having killed the soldiers, the computer takes control of your man and he goes through the gate. I find the best way to kill soldiers is to stand at the bottom of the screen, fire the machine gun and lob grenades simultaneously — you must stand directly below the gates.

If you have a Quickshot II joystick you can use the keyboard for direction control and grenades while you use auto-fire on the joystick. You can do that by pressing 0 for the fire button while redefining the keys. That makes the game a lot easier.

Robert Parker,
Hall Green,
Birmingham

IN REPLY to Paul Whitby's letter in the March issue. I finished **Commando** on March 3 with a score of 405,100 and reached area 14 in 25 minutes.

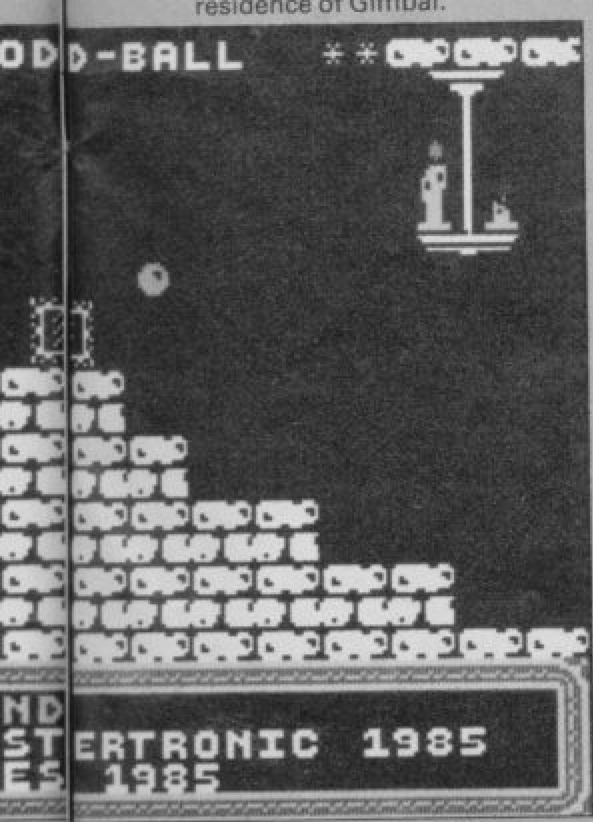
Paul Bradley,
Scarborough,
Grimsby

You will also notice that two bricks have been deposited on the ground after this event. Stack these one on top of the other to make some steps. You can now leap over the wall on level four. Now go to the ground floor and summon Rosmar. Give her the pocket laser and command her to help — she'll melt a hole in the wall and give you access to the residence of Gimbal.

Now get the javelin from level four, give it to Samsun and command him to help at the pit on the ground floor. He'll throw his platform into the middle allowing you to cross, cautiously, into Gimbal's residence — the most magic room.

You will notice a broken talisman on the ground floor. To fix it give it to Florin with the tube of glue and command him to help. Later on in the game you will need to throw each of the crystals at Gimbal.

Mat Newman,
Whittlesford,
Cambridge



ANYONE got **Spellbound**?

Merge in the Basic loader, edit it, and put a Print command in the program. Run the loader and when the game starts an interesting message will appear on the screen.

If you have **Bored of the Rings** you'll find that the file called Sceptical, on side B, is a tape magazine. Load it and when a message appears stop the tape, type in anything, and press Enter. The program will New and you can load the rest of it.

Chris Pierssené,
Windlesham,
Surrey

Three Weeks

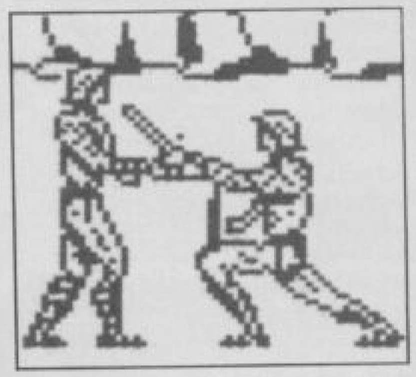
I AM WRITING about a mistake in **Three Weeks in Paradise** — April issue.

On freeing Wilma, Alexander May suggested, "Get the spinach. Go to the screen with the large bird — next to Wilma's screen — and get the egg."

This is wrong. Instead, get the spinach and go to the screen with the seaside picture in it. Take the stuffing off the table and then go to the screen with the bird in it. Take the egg.

Andrew Davis,
Bartley Green,
Birmingham

Gladiator



I COMPLETED **Gladiator** on March 16 and have perfected a routine which allows you to win every time.

1) Select an axe 2) select a trident 3) select the two-pronged dagger 4) start 5) throw trident at your opponent 6) walk forward and try to avoid your opponent's weapon until you are touching him 7) go up or down until you are either directly above or below him 8) move forward slowly until he turns round 9) walk back slowly until he walks in front of you 10) now stab him in the back 11) if he turns round, go back to step 6 12) repeat until free.

Dave Williams,
Moreton, Merseyside

Ping Pong

I HAVE found a number of bugs in Imagine's **Ping Pong**. If you press a key when the music at the end is playing, the game crashes.

On your first service, play the ball over the net as usual and on the returned ball, smash it. The score goes mad and you'll progress to the next level even though the ball has been hit into the net.

If the game goes to deuce and the score is 12-10 to the computer, play to 12-11 and you'll win even though you're lagging behind.

Darren Howes,
Wirral,
Merseyside



Sir Fred

IN SIR FRED there are three ways to enter the castle.

Let the rope down on the screen which is to the left of the first screen. Climb down and get the bow and arrows. Swing on the rope and get over the cyan rock. Go left, jump onto the drawbridge chain, walk to the top, crouch and jump into the castle.

Or get the matches from the screen to the right of the piranha pool and the meat from the first screen. Pick up the matches, go back to the piranha pool, go up and flick the switch. You can then use the matches to explode the bomb on top of the pitchfork in order to pass it.

Or get the meat from the first screen and the sword from the screen to the right of the piranha pool. Get the bottle from the screen which is to the right of the one above the piranha pool by using the switch. Go back to get the sword and use the bottle to call the ferryman. Use the sword to kill the swordsman and get into the castle by climbing up the well rope.

Miles Stubbing,
Chessington,
Surrey

Jasper

IN THE April issue, Jonathan Langham couldn't get past the snakes in **Jasper**. Here's how.

Take the umbrella — although you already have one — and jump off the platform above the first snake.

Now open the umbrella to break your fall by pressing the appropriate box. When Jasper has landed between the snakes pick up the two magenta flowers — to be found on the first screen. Jasper can now jump higher and further than previously. He has two leaps per flower and can now jump the second snake and dodge the spider.

Jason Radford,
Kingswood,
Bristol

► 22

21 ◄

Their Finest Hour

THIS IS for all those frustrated Battlers of Britain, who have found that after a long day in the control room Churchill tells them that all is not lost and they must redouble their efforts to save Western civilisation.

If you have saved your progress to date on **Their Finest Hour** only to discover that it will not load successfully when required, here is the answer.

Follow the load procedure until you are asked for the code. Do not enter the file name but press Enter and the saved file will load successfully.

D F Fancombe,
Dunnington,
York

Winter Games



I CAN BEAT John Gilbert at his own game in **Winter Games**.

My personal best is:

Event	Record
Ski jump	226.4 points
Hot dogging	9.2 points
Speed skating	0: 37.1 secs
Figure skating	3.2 points
Biathlon	2: 47.0 mins
Bobsled	0: 25.17 secs
Free skating	6.0 points

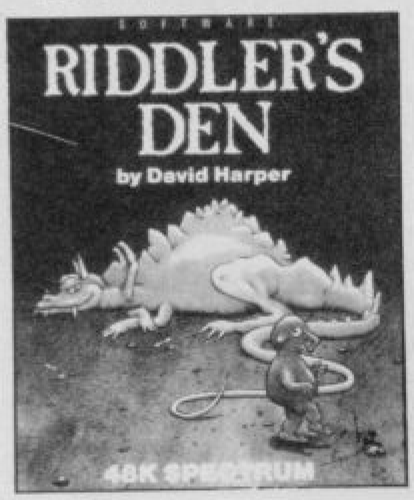
M Jowse,
Wiliberby,
Hull

Saboteur

I HAVE DISCOVERED a bug in Durell's **Saboteur**. If you go straight to the helicopter without collecting the bomb or disc, the screen shows the message 'Mission Successful'.

I scored 5,200 on level two of **Saboteur**. In **Match Day**, from Ocean, I won 12-0 on International level in response to 10-0 from David Starkiss in your March issue.

Scott Moncrieff,
Lanarkshire,
Scotland



Riddler's Den

THIS IS a plea for help with Electric Dreams' **Riddler's Den**. My highest score is eight per cent, even though I, and other Spectrum users, have tried in vain for hours on end to get further into the maze.

So far I have slept using the pillow and dropped the money bag at the bank. Please help relieve a desperate person from his frustration.

Simon Creasey,
Stratford-upon-Avon,
Warwickshire

One man and his Droid

THE PASSWORDS for the first ten levels in Mastertronic's **One Man and his Droid** are None, Empire, Predatory, Ruminate, Ryegrass, Vacuum, Vampire, Ragout, Grain, Rasvogel.

My highest score is 8609.

Lee Widdows,
Brentwood,
Essex

Tomahawk

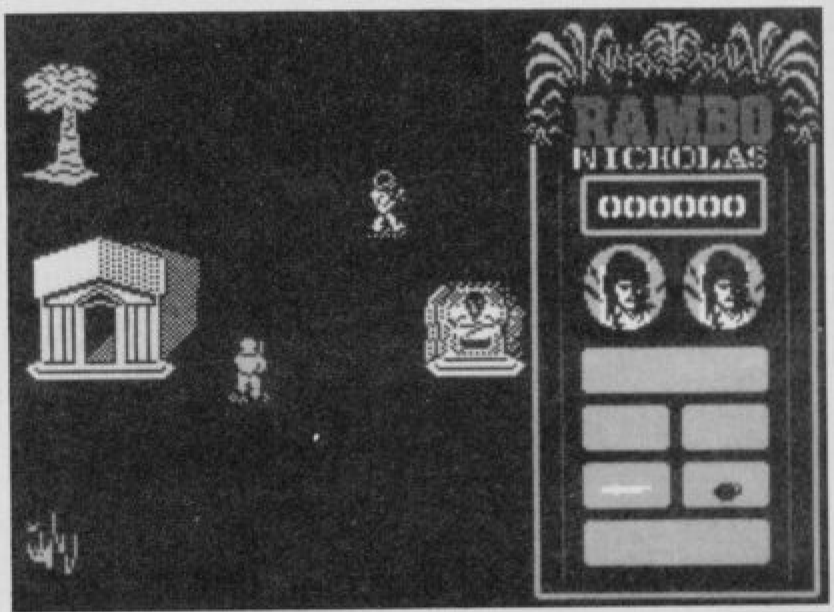
I HAVE just completed **Tomahawk** on option two in 17 minutes. Can anyone help with directions on how to find the polycrete factory in **Panzadrome**?

M Sherry,
Wirral,
Merseyside

Transformers

I HAVE completed mask one and mask two of **Transformers** with a score of 26605. Can anyone beat this?

Duane Batterton,
Harleston,
Norfolk



Rambo

HERE ARE some tips for Ocean's **Rambo**.

The start: use just the knife, and only if you have to. All other weapons attract unfavourable attention. Do not progress until you've found the rocket launcher. Pick up the other weapons for large scores.

The assault: blast the bridge leading to the POW camp with the rocket arrow — the grenade may also be used. Use only one shot from the rocket arrow and switch back to the knife. Hug the buildings for cover — this confuses the enemy. Cut Banks loose.

The escape: switch immediately to grenades. These are the most effective for close fighting and, as the whole camp will be on your tail, you won't need to bother about noise. Just hurl the grenades in the general direction of the enemy and . . . Buammo!

Make your way north-east until you find a fence running upwards on your left. Follow it northwards until it ends, round it, and turn left. The enemy is particularly vicious and plentiful at this point. Continue west until you hit another fence. Follow it south, round it, and turn north. Follow the fence upwards, turn north-east until you come to another fence which is shorter than the rest. Follow it north to its end then turn north-west, and you'll come to the helicopter.

The helicopter: board the helicopter and once in the air, switch to the rocket launcher and blast everything in sight. Some buildings may be shot twice for 100 points. You may land at any pad marked 'H'.

The prisoners: fly south down the left-hand side of the screen and land on the pad in the compound. Using grenades, make your way east. Switch to the knife when you see a bamboo hut and cut the prisoners free. Now run back to the helicopter.

Keep flying north-east and avoid the super chopper on its suicide mission. Land on the pad, move upwards and enter the hanger to finish the game.

General: always stay out of the soldiers' line of fire. Shoot the trees for 100 points while in the helicopter. Leave the area in your helicopter, then return to the original helicopter pad where you first found the chopper. There will be another helicopter on the pad, blast it for huge scores each time.

Francois Venter,
South Africa

Frankie Goes to Hollywood

I HAVE just completed Ocean's excellent game **Frankie Goes to Hollywood** and here are a few tips.

To start off, you can use the flak jacket in the ZZT room — it will free you from any pain caused by the bullets. In the war room and the cybernetic breakout rooms you can use the wedding room to free you from pain. The security pass and the floppy discs can be used in the computer room.

Don't waste anything or you will lose points.

Gary Rason,
Kilburn, London



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FEATURES

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FEATURES

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Quazatron

HERE COME the Droids! Scores of them, deadly in combat, of every rank and class — medic droids, logic droids, security droids, command droids, repair droids. From the lowly menials to the deadly battle cyborg, they inhabit Quazatron — underground technopolis of Quartech.

Then there's you. KLP-2, the most famous bot in the galaxy. Accidentally, while training as a droid mechanic, you dismantled your teacher. After that things went from bad to worse. A highly developed ability to take things to pieces led you to a posting at the end of Empire, where you redeemed yourself by dismantling the left leg of Mandroid, the space pirate. Now you're a public hero.

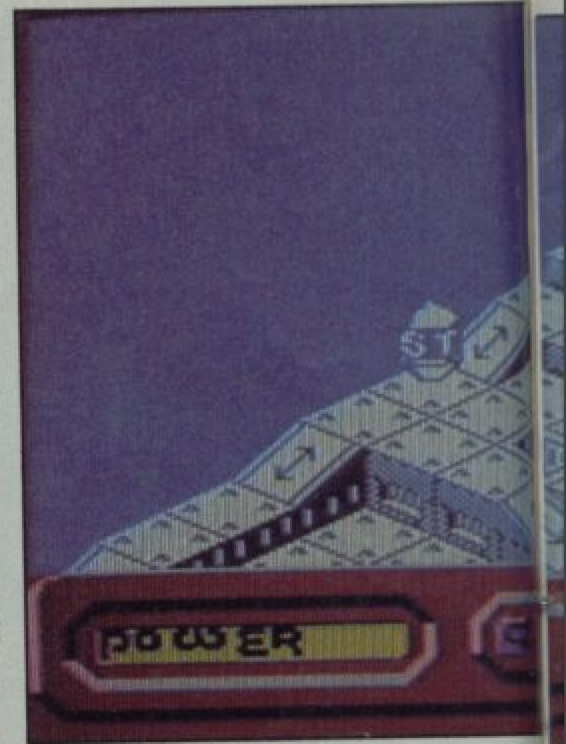
And now, because of your fame, you've been sent to Quartech to dismantle, destroy, or otherwise demoralise the alien droids of Quazatron.

This latest game from the gifted mind of Steve Turner, programmer of **Dragontorc** and **Avalon**, is a magnificent blend of arcade action and strategy. It owes much to Andrew Braeburn's Commodore 64 game **Paradroid**, also published by Hewson, but for my money **Quazatron** has a wonderful quirkiness that lifts it well above the earlier game.

The city is built on seven levels connected asymmetrically by lift shafts. Each level has a completely different layout of ramps and shafts. The impression is a little like a **Marble Madness** scene, but the similarity ends there.

You can climb up and down ramps and, of course, move along the level, but you cannot climb up a straight edge. Falling off an edge drains your energy, and some of the great cliffs that split a few of the levels into two halves represent instant suicide if you take the plunge. The alien bots may well try to push you over — especially if they are more powerful than you.

You can shoot down droids and, if you are superior in strength, destroy them by ramming. But even if you're the greatest zapper that ever held a joystick, you would still run out of power long before you finished the game. To get more power you might try to juice up from the power points scattered around each level. Better by far to rely more on your famed ability at taking the opposition to bits — literally. Here's how.

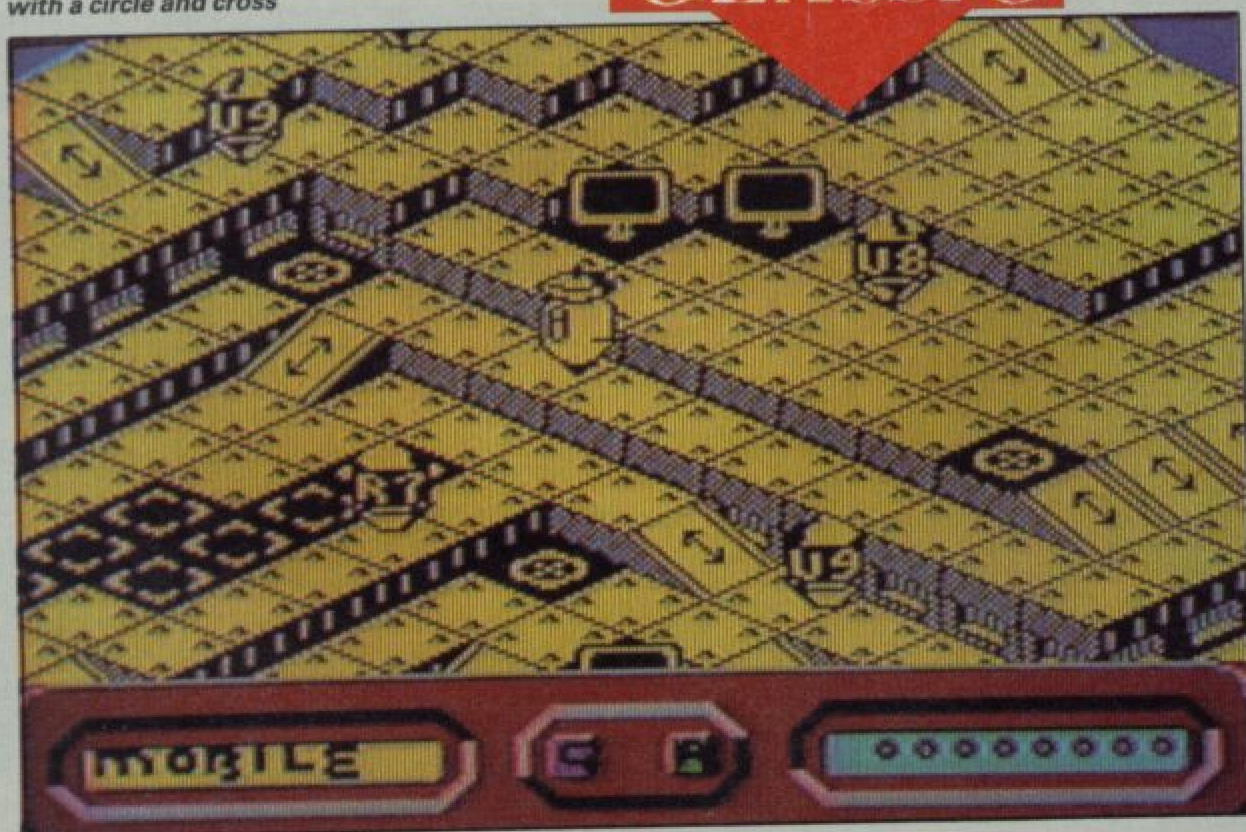


▲ Two powerful security droids have KLP-2 trapped at the top — dare you make the switchback run down the right-hand side?

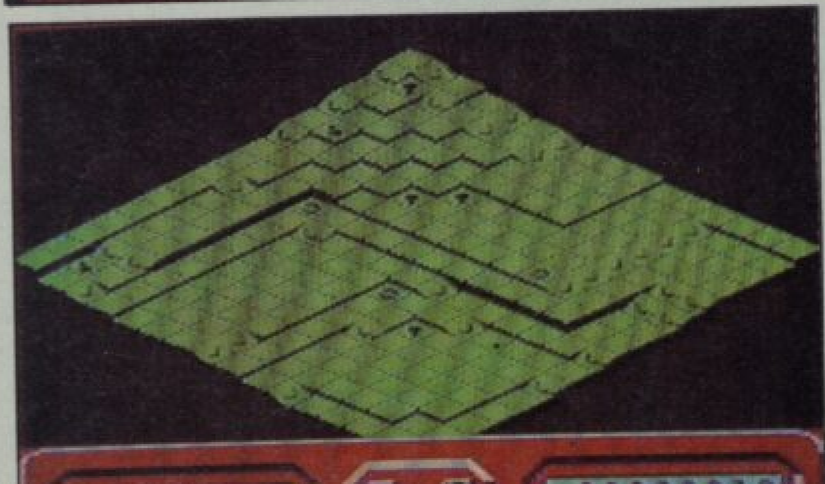
When you move you can either be in mobile mode or grapple mode. In the former you can fire your rockets at the enemy. In the latter you can close for a form of robotic wrestling that scores full marks for novelty and addictive pleasure.

SINCLAIR USER CLASSIC

▼ KLP-2 moves towards a power point — the dark square with a circle and cross

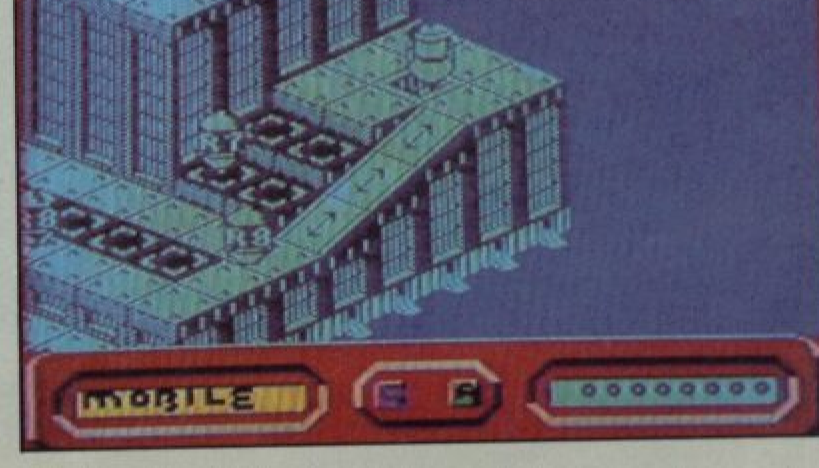


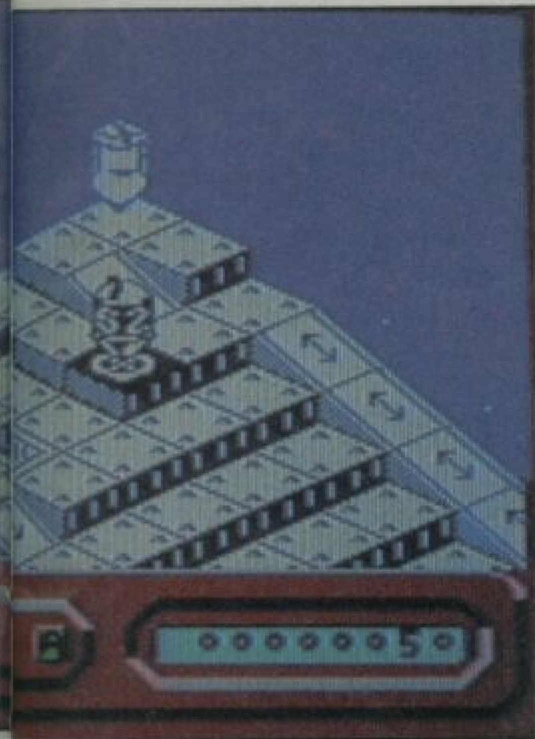




▲ A full plan of the current level can be obtained from the information terminals

▼ KLP-2 is about to enter a lift. Above looms a higher part of the level, only accessible from another shaft





When you make contact in grapple mode, the screen switches to display a diagram of the two droids' security circuits. Well, that's what the instructions say they are.

A series of lines, one side blue and the other yellow, meet in the centre of the screen where a barrier separates them.



The barrier is coloured alternately yellow and blue where the lines strike.

Each side has a number of pulses to send down the lines and a time limit in which to despatch them. Some of the lines are dead ends, others split into two, some converge on a single part of the barrier. You get a short time to decide which side of the circuit to play and then try to turn as much of the barrier your colour as you can. The opposing droids play more or less efficiently depending on their power.

Once you win a victory — by coverting more than half of the barrier to your colour — you can take your pick from the various components of the enemy droids. The closer the battle the more likely some of these are to be damaged.

An overwhelming victory will give you a free choice — but beware, a powerful drive unit may require more power to fuel it than you can afford. Sophisticated weapons and shields may put too much of a strain on your drive unit, and so on.

Details of the characteristics of various units are available through the monitor terminals dotted about the levels. However, you will receive information on the parts carried by droids of similar or lower rank to your own current configuration. To improve you must take on a more powerful droid — blind.

The droids are graded from one to nine — one being the most powerful. However, you must still be careful over what equipment you pick, as even the most mighty droids may not be superior to you in every part. And if you overload yourself with heavy, fuel-hungry gear you'll be risking everything when power runs low.

The graphics, even on the pre-production version I have been playing, are superb. The playing area of each level is large, and although the scrolling was not as smooth as I would have liked, Hewson assures me that problem will be solved in the finished version.

The game plays fast — again, that is to be slowed down a fraction, although I don't see any particular need for it. Keeping the balance between grappling and shooting enemy droids is a nice exercise in strategy, and the whole idea of cannibalising the enemy for spare parts appeals equally to my sense of humour and love of variety in games.

Another feature I enjoy is an almost complete lack of status tables, energy and so on. Your power level is indicated by the rate at which your droid's head revolves. When it gets really low, KLP-2's face assumes a gloomy expression, and at rock-bottom the movement mode indicator flashes a warning.

Apart from that, the only indication of your status is when the lighting on a level goes dark because you have killed all the droids, and when you win a grapple contest — you are reminded then of the components currently installed on your droid.

That vagueness about how well you are doing until you start doing really badly makes the game a major challenge. In fact, it's quite easy to run around having fun, killing droids and ripping off their usable parts. But you must plan carefully if you want to survive for long, husbanding your power supply until you can be sure of obtaining better.

SOFT 5 WARE

Different levels have higher concentrations of powerful bots too. If you knock out too many of the really powerful ones in one visit, you may find you have wiped out and wasted a major source of good equipment and cannot clean up the rest of the city in time. The potential for complex planning is great.

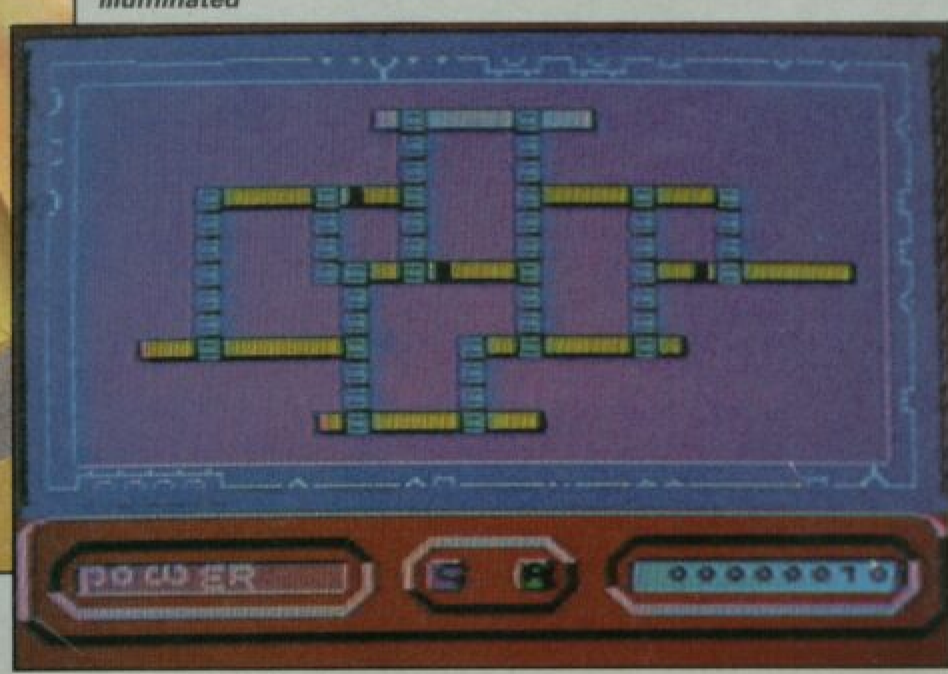
Compared to Steve Turner's previous games, **Quazatron** seems much more light-hearted in concept. But it's certainly not a quick throw-away between major games. I found it one of the most refreshing games I've seen in months, and I'm sure I'll be returning to it many times.

In spite of the fact that the copy I've been using still has a few rough edges to it, I'm in no doubt at all about awarding **Quazatron** a Classic. It's a magnificent program as it is, and the slight improvements promised can only make it better. **Quazatron** had me hooked from the start.

Chris Bourne

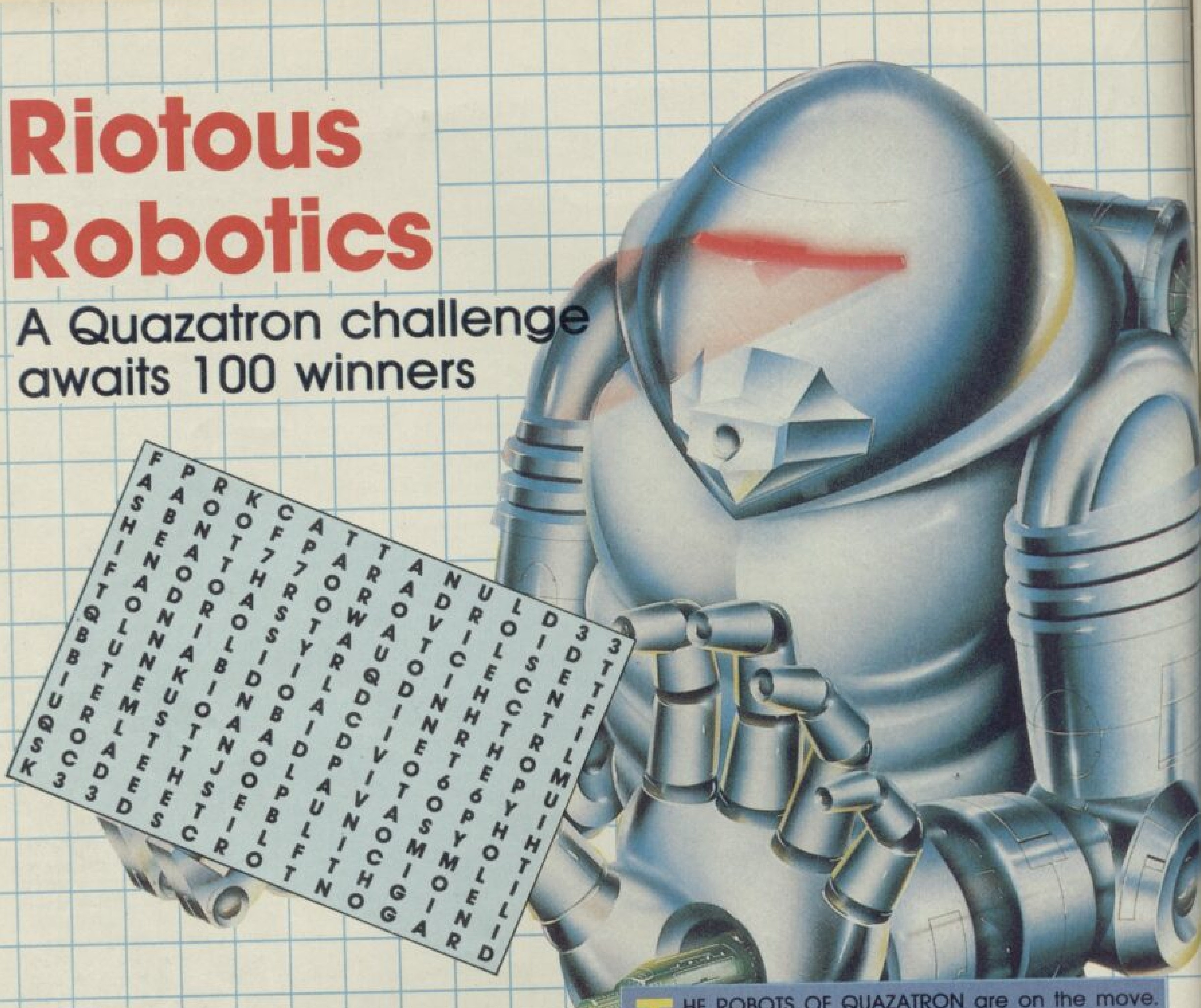
Publisher Hewson
Programmer Steve Turner
Price £8.95 **Memory** 48K
Joystick Kempston, Sinclair, cursor
★★★★★

▼ A plan of the levels and lift shafts. The current level is illuminated



Riotous Robotics

A Quazatron challenge awaits 100 winners



COMPETITION



COMPETITION

THE ROBOTS OF QUAZATRON are on the move. Eager-beaver bots, pursuing their logical tasks with irritating precision about the levels and pathways of the great underground city.

Just asking for it, they are. Just begging for someone with twin lasers and muscles of steel to come along and teach them a lesson. Someone like you, Meknotec KLP-2. Well, your muscles certainly aren't made of water.

Courtesy of Hewson, we've got 100 copies of the latest robotic riot to give away. Blast the completely inoffensive menial droids. Grapple with the ferocious battle cyborg. Scorn the threat of terminal burnout as you fight your way to victory.

It's a complicated place, the city of **Quazatron.** Full of ramps and shafts, cliffs and corners. You'll have to think fast to survive. So before we let you loose on the game, you'll have to solve our little puzzle.

Hidden in the wordsquare are 12 titles of Hewson games. Included in those 12 are a couple of titles for the Commodore 64 — just to make life a touch more difficult.

The words are written upwards, downwards, forwards, backwards, or diagonally. Find them all, write the titles on a postcard with your address and send it to us at **Quazatron** Competition, *Sinclair User*, 30-32 Farringdon Lane, London EC1R 3AU not later than. Friday...

Robots and others working for EMAP and Hewson consultants are not allowed to enter.

STAR RATINGS

All software reviews carry a star rating, the basis of which is value for money. Programming, graphics, speed, speech and sound on 128K games, presentation and addictive qualities are taken into account

SOFT ? WARE

★★★★★
Solid gold. Buy it

★★★★
Well worth the folding stuff

★★★
Pretty average. Buy if desperate

★★
Very poor. Probably over-priced too

★
A total rip-off. Complain loudly

SOFT PREVIEW 48K

Where we preview a game, a full review will follow at a later date giving the price and a star rating



MUGSY'S REVENGE

GEE BOSS, dis is it. With your 50 grand and my brains we can break into da seedy woild of smuggling.

So what if it is prohibition, Boss? Dere's a lotta money to be made. Yeah, well da foist thing is to hire da boys — hoodlums, Boss. Now how many ya want? Remember Mugsy, we gotta make wid the foldin' stuff. Five grand to Pat McGroin — yeah, revolting name — and two grand for Pickey Zitz.

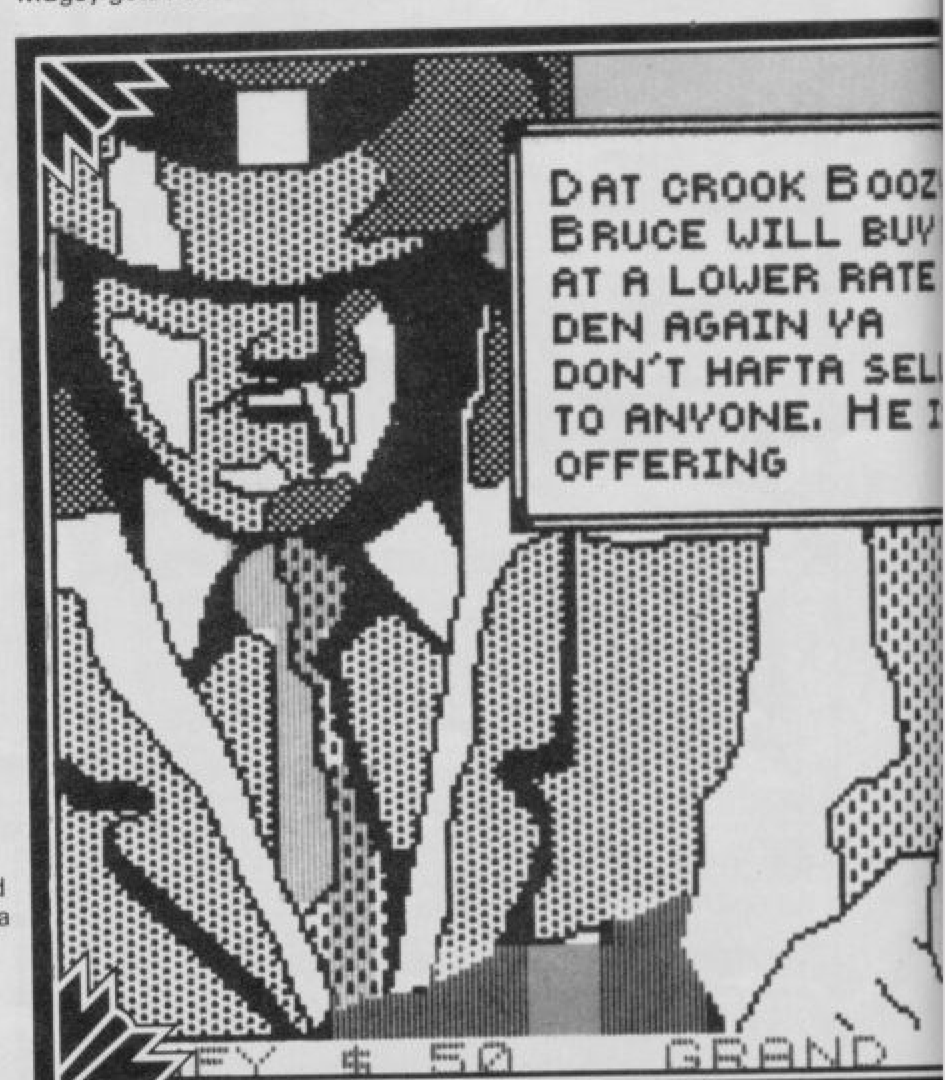
Boss, Boss. I don't unnerstand ya. If you pay Pat McGroin two grand you'll have to pay foive grand to stop him squealing to da Feds. Now that's finished can we buy some liquor, Boss? How many barrels ya want? Take 40, Boss, we can buy at $700 a barrel and sell at $1400 a barrel.

Hey, Mugsy. How much you gonna pay to set up da smuggling net? — I advoise 16 grand — dey gotta good ring up there. Now how much you gonna give da police charity fund? Two grand — very generous.

Boss. Pat McGroin squealed to da Feds. We got nothin' left. Gee, you're a turkey Mugsy, you couldn't even run a kindergarten. Hey Boss, you know wha. . .(dat's enough, goil, dis Mugsyspeak is getting on my noives. Da Ed).

Well, having flunked the smuggling game, Mugsy and Co try again but this time with better results. By paying out a few more grand to the boys and the Feds they manage to make a profit. The Capo and the Italian mob haven't muscled in and Mugsy sets up a speakeasy to sell some of his liquor. At $3 a glass who wouldn't make a profit?

To add a little extra spice, Mugsy puts some goils in the clubs — they bring in the customers, the customers drink, Mugsy gets rich. And then after paying out vast back-handers to everyone in sight, something drastic nearly always happens. Like Mat Guano running off with all the clubs' takings, or the



mob taking a third of the profits, or the Feds taking the lot.

When disaster strikes, and if you've got the cash, you can always take out a contract on whoever's causing the problem. However, if you don't pay the hitman enough, the contract might fail and it's the soup kitchens for you, Mugsy.

Of course, as you become more successful, so your empire expands. In gangsterspeak — the family grows as do your responsibilities. Your main worries are paying off those in authority — so always keep enough cash for those little emergencies, and enough liquor in stock to keep the speakeasies from running dry.

Gameplay is almost exactly the same as that in **Mugsy**, its predecessor. **Mugsy's Revenge** is a partially animated strategy game, with detailed and beautifully illustrated pictures of a 1930s gangster Chicago scene — shifty characters lurking on street corners with turned up collars and pulled down hats. As you progress into the game more backdrops appear, so that the buying and selling of liquor takes place on the dock and so on.







Instructions are carried out by single keypress. As Mugsy you are constantly being updated on your various rackets by a member of the family. He'll ask you to make decisions by asking questions in comic-style bubblespeak. You answer by Y, N or a number signifying dollars, barrels, goils or whatever.

Just occasionally you'll make an enormous error and find yourself in the game's only arcade sequence — the shootout with the Feds. It's helpful if Mugsy's got his shooter and you've got a joystick handy. It's a simple job to despatch the five or six Feds because they move like snails and have about as much intelligence.

At the end of each year you're treated to a short animated film sequence. Interesting the first time round, but by the fifth, it tends to lose its appeal. The clip is of Gino's Pool Hall and is accompanied by some atmospheric music. Peering through the windows you see a game taking place. Tempers start to rise and one of the three players leans over to pull the blinds. Your final glimpse, as the blinds are pulled, is of one of the players being thrown across the pool table. Hot stuff.

The game ends after a number of years when the law is repealed and prohibition is at an end. That is the most effective way of putting Mugsy out of business and you must leave everything clean and tidy, take your profits and run.

Mugsy's Revenge is relatively addictive and attempts to cater for all tastes with its arcade sequence. If you win it's as much by luck than good judgement as the amounts you have to pay out are selected at random. Sometimes you'll get off quite lightly, other times all your profits go in back-handers.

A complex and an enjoyable game — although I suspect it will begin to pall when you try for the seventh or eighth time to trade your way into year four.

However, there is a bonus — side B of the cassette contains a copy of the original **Mugsy**. For that reason, and because the package is such good value, we have awarded it four stars.

Clare Edgeley

Publisher Melbourne House
Programmer William Pang
Price £8.95 **Memory** 48K
Joystick Kempston, Sinclair, cursor
★★★★

FA Cup Football

ONLY THE most bone-headed of Arsenal supporters could conceivably enjoy playing this much-hyped Virgin production. Play, did I say? Crush my cartilage for a liar, but there's sweet FA to play in this game, if you'll forgive the pun.

There's lots and lots of teams, and you pick eight. If you have eight players each picks one, if you have four each gets two and so on. Wonderful stuff, and I'd tell you exactly how many teams there are if I had the energy to load the game up again and check. It's over 100 anyway.

To give the game its due, it does claim to be an accurate representation of the FA Cup, has FA Cup official approval, and the top teams tend to make it to the later stages. Unfortunately,



you get to do very little. Unlike the marvellous **Football Manager**, this sorry little apology for a strategy game merely requires you to decide your general tactics — defensive, balanced or attacking — and in later stages offers you the chance to make a substitution or answer questions about decisions. Those are of the form, "What sort of boots would you wear for wet weather?" I didn't spot wellies as an option, but by this stage I was groaning at the sheer tedium of it all anyway.

You think I'm exaggerating? That is, literally, it. You watch as the draw for each round takes place, you then decide the tactics for your teams, you then watch the seconds tick away and occasional goals flick up on the scoreboards. No graphics chum, nothing like that. Eventually you go to sleep.

Liverpool managed to make it to the final, playing Everton. The robotic rendition of *Abide With Me* — nothing is spared in this game, not even your ears — jolted me out of slumber for long enough to record a note about the sinister hissing that passes for the roar of the crowd afterwards. Perhaps they were having a go at Grobelaar again.

I can think of absolutely no good reason to buy this game. It's got to be one of the worst things Virgin has ever done, and that includes some all-time turkeys. It's even worse than **Sheepwalk**. Ignore it.

Chris Bourne

Publisher Virgin **Programmer** Kerian UK
Price £7.95 **Memory** 48K
★

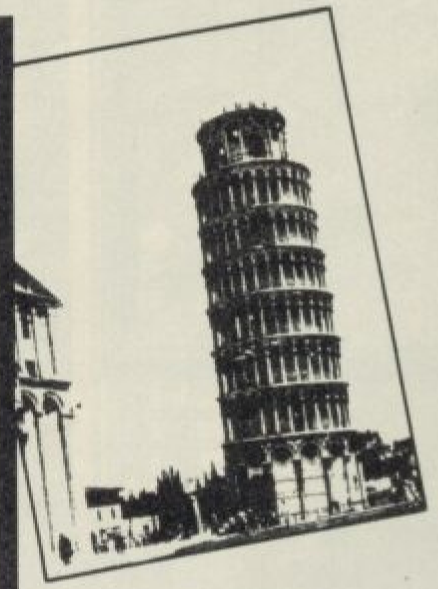
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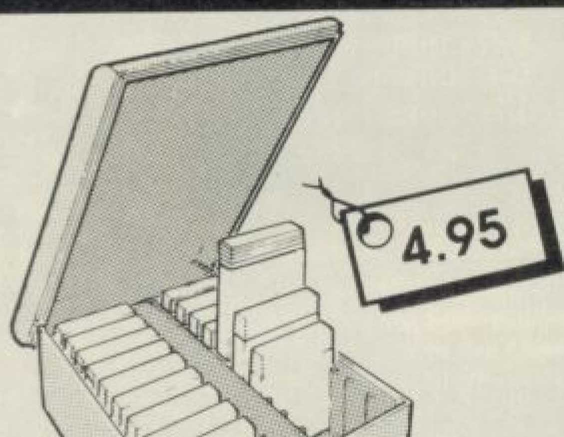
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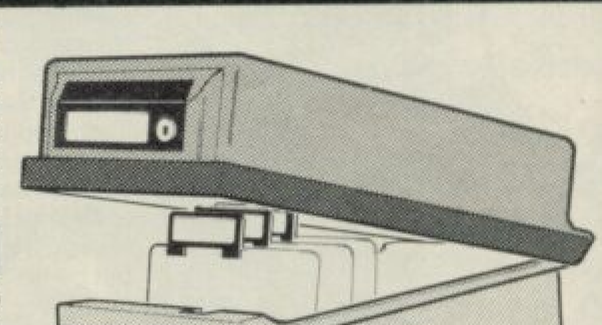
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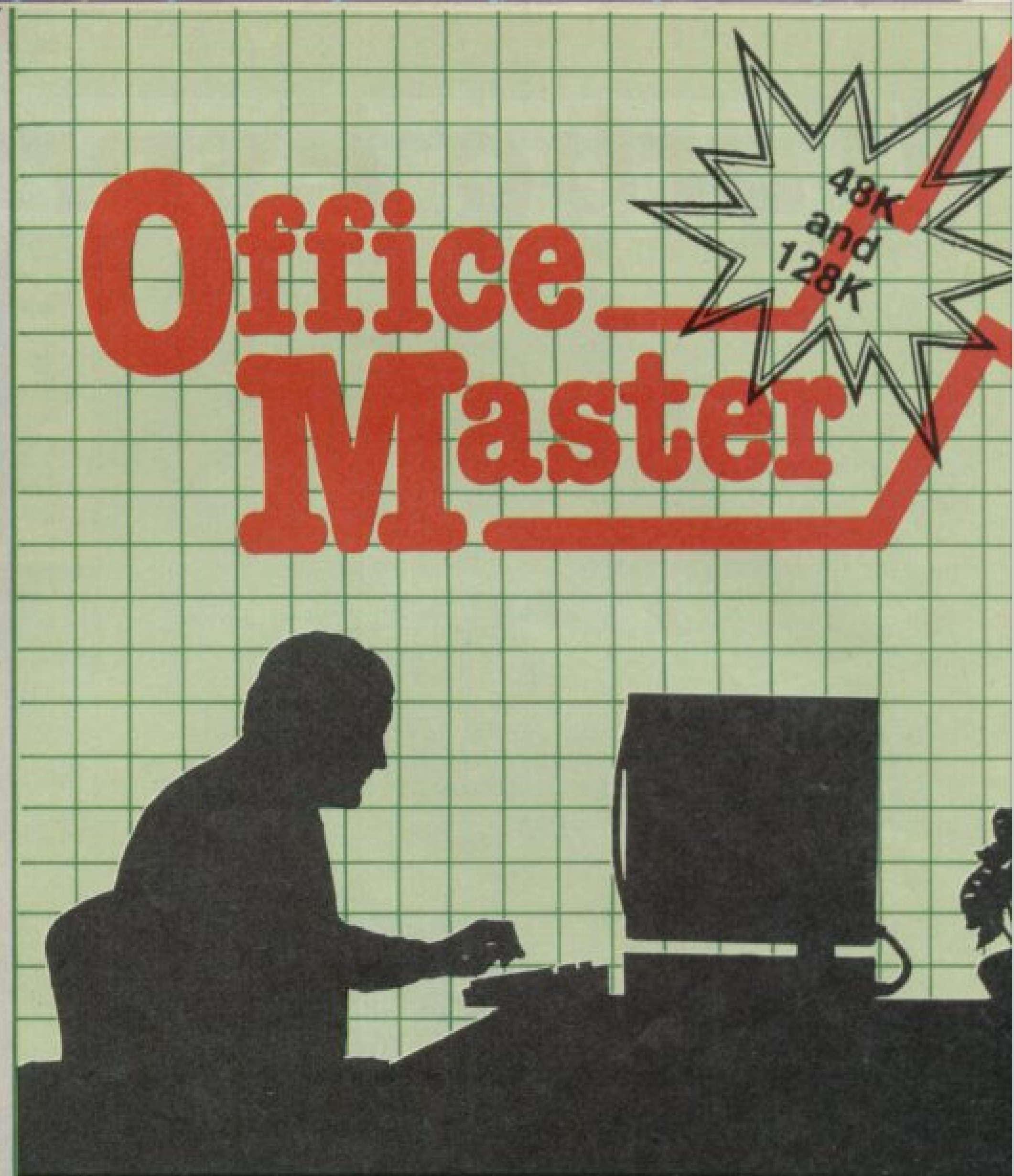
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Turbo Esprit

THERE MAY BE traffic lights at the busy junctions in town but it's difficult to spot them, let alone react to them, when you're having 100 mph fun in a turbo-charged Esprit.

The Turbo Esprit is one of the most dynamic cars in the world — as well as one of the most expensive — so it's good to see that Durell Software has given it the simulation treatment which will give you the pleasure of driving one.

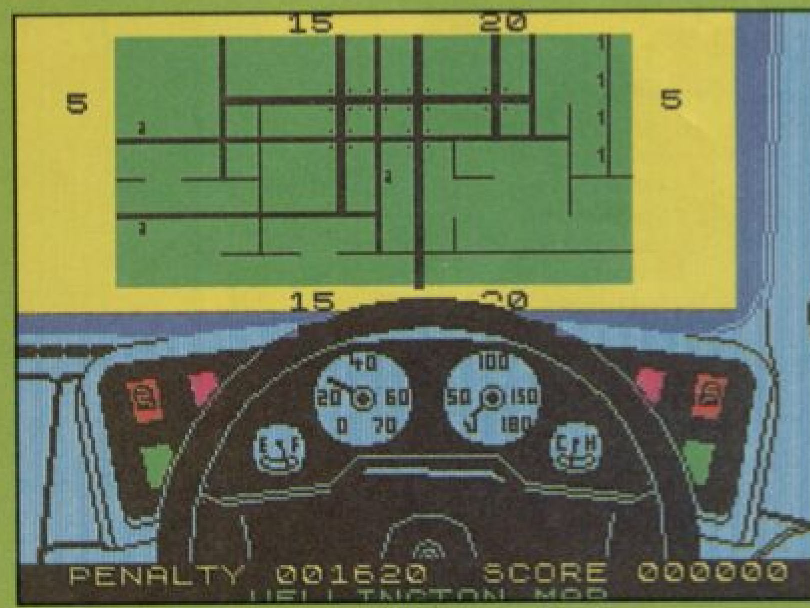
While the software provides a fairly realistic simulation, it also gives games players something to get their teeth into. Your job is to patrol the streets of Wellington, Gamesborough, Romford or Minster in search of drug traffickers.

The car contains the very latest technology — the simulator screen displays its interior with flashing indicator lights, and a steering wheel which really turns when you're at the controls.

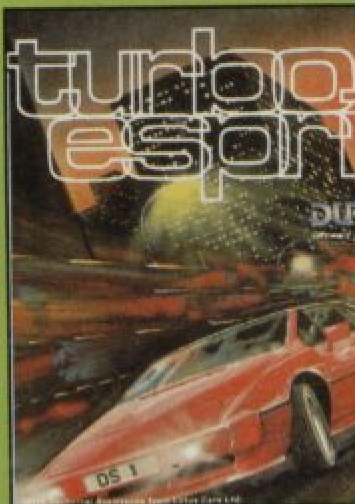
The town streets are displayed in 3D and viewed through the windscreen. As you change lanes, swerve and turn you can also see your car on the road, mingling with the other traffic.

Drug trafficking is rife in all the towns, and your job is to stop or destroy four types of smuggling vehicle before a deal is made and drugs exchanged. The first, and most common, vehicle is the blue delivery car — there are four of those involved in each stage of the game. Drugs are delivered to seedy rendezvous using red coloured armoured supply cars.

To stop the armoured cars you must bump into them — you cannot shoot them with the machine guns your bosses have installed on the Esprit. My advice, where these are concerned, is to leave them alone. If you stop an armoured car before it's made a pick-up you will gain only a few points, and no more armoured vehicles will come into the town. Go, instead, for the delivery cars but make sure you catch their drivers red-handed.



The Wellington road map displays your direction



Hit cars are the vehicles to avoid at all costs. They are coloured magenta and will sneak up behind you. The mob has a permanent contract out on the Esprit and won't fight shy of turning you into lots of little twisted pieces.

The first you will know of a drugs exchange will be a flashing message on the Esprit's computer console. You should then switch to the map which shows your car and the position of any villains in the sector. The next step is one of action — chase the mob and, if possible, eliminate them.

You can shoot down villains with your machine guns, but a more civilised way, and one which earns you more points, is to bump into them. Their car will be disabled and you can book them for drug and speed offences.

SOFT 5 WARE

The simulation does not encourage bad driving habits. As well as containing a high score table it also has a table for traffic offences. It's very easy to score there. Just ride up on the pavement and let rip with your machine guns, or turn some poor innocent's Cadillac into a Mini. When you start playing with this simulation you are more likely to figure at the top of the penalties table.

Turbo Esprit is a spectacular simulation which handles like a sophisticated 3D arcade game. The author has put a lot of effort into the smooth and realistic three-dimensional effects which make it one of the best simulations on the market.

The game is what **Juggernaut**, from CRL, should have been and what **Knight Rider**, from Ocean, will need to beat when it comes out. Buy this game even if you hate simulations. *John Gilbert*

Publisher Durell
Programmer Mick Richardson
Price £7.95 **Memory** 48K
Joystick Kempston, Sinclair, Protek, Downsway
★★★★★

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Back to the Future

GEE, I guess I must be the only kid on my block not to have seen *Back to the Future* — that latest blockbustin' slice of small town hokum from the Spielberg stable. But now I've got the computer game and I still want to see it. And that's no thanks to Electric Dreams which deserves a highly commended prize in the **Friday 13th** Awards for tie-ins.

For other unfortunates who've not yet seen the movie, the plot concerns Marty McFly, a regular teenage guy who makes the mistake of accepting a lift from a stranger. It's a mistake because that stranger happens to be Dr Emmett Brown, a scientist who got his PhD in whacky ideas, and the car is a converted DeLorean — one which travels through time. For the first time in his life Marty is early for something. Thirty years early!

Luckily Marty has benefitted from the fine American education system, so when he meets his parents as teenagers — 1955 vintage — he realises that unless they. . . well, you know . . . get together then he won't be born. To add to the complications his mother, Lorraine, falls for him rather than shy, head-hanging wimp, George. Not stopping to consider the Freudian potential of becoming his own father, Marty attempts to unite his parents-to-be, and avoid the school bully, Biff.

Apologies for going on at such length about the plot, but it is this that the Electric Dreams programmers have seen fit to try and convert into a game. The action — and I use the word lightly — takes place along the main street of a small American town and in four buildings off it — the school, Doc's lab, the dance hall and the coffee bar.

Each one has its own associated object. You find love poems on the school shelves; an alien suit in the lab; a guitar in the dance hall and you'll never guess where the coffee comes from. You'll need all of these for Marty to arrange the marriage.

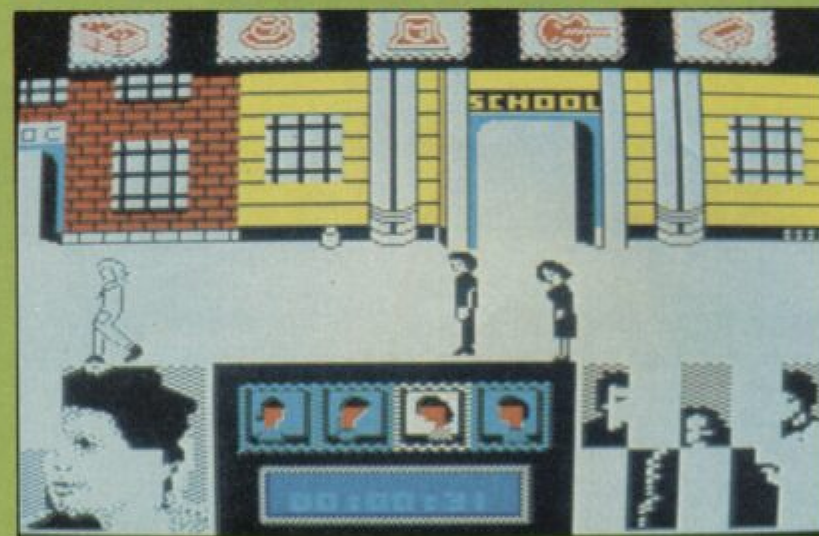
The main screen is taken up with a view of the main street or the rooms. I've always associated Spielberg's films with a certain visual richness, and not the rather plain looking scenery here. Down these bland streets the characters wander aimlessly.

At either end of the street you'll find a pile of packing crates which Marty can convert into a skate board. This is the only time there's any real speed as Marty leaps onto the board and zooms along for the length of a full four screens.

Beneath this positively underwhelming vista lie the status panels. First up is a picture of Marty which fades as he becomes less of a potential twinkle in his parents' eye. Centre screen are four unrecognisable portraits of the major protagonists in this drama of love and intrigue, and below them is a clock so you can judge how you are doing.

To the right is a family picture. Each time you lose a photo of Marty another section fades, and once it's all gone there's no future for our hero. If you choose a higher level of difficulty you'll get fewer sections to start with, and people's behaviour will become more erratic.

Above the main screen are five little icons for the objects already mentioned. When Marty passes the location of one its icon turns yellow, which is just as well because, apart from the guitar and alien suit, you'd never know they were there.



It's the start of the game and Marty's picture is almost all there but Doc's already leaving

Providing Marty is close enough, each object will interact with another character causing one of four results when the person's icon turns white. The character may turn away, stand still, follow Marty or ignore the object.

People being people they also respond individually so that, in theory at least, Biff always walks away from the loony Doc but hits Marty at every opportunity.

Yes, you ask, but what about the . . . nudge, nudge, wink, wink . . . other bit? All you have to do is get George and Lorraine to stand together long enough to fall in love. Stand together! Is that all it took back in '55?!

You do this by exploiting the effects of the objects, just as in the film when Marty dresses up in the alien suit to scare George into going to the dance with Lorraine. Of course, it's not easy with everyone wandering about, living their own lives, and I think if all the future held for me was games like this I'd prefer not to be born, thank you.

I'm sure the game is playable as a sort of frustrating puzzle if you want to persist. The main problem is that, apart from the opening rock 'n' roll theme, and the reproduction of the poster on the packaging, it's so unappetisingly presented that I can't see why anybody would want to persist. The stick figures



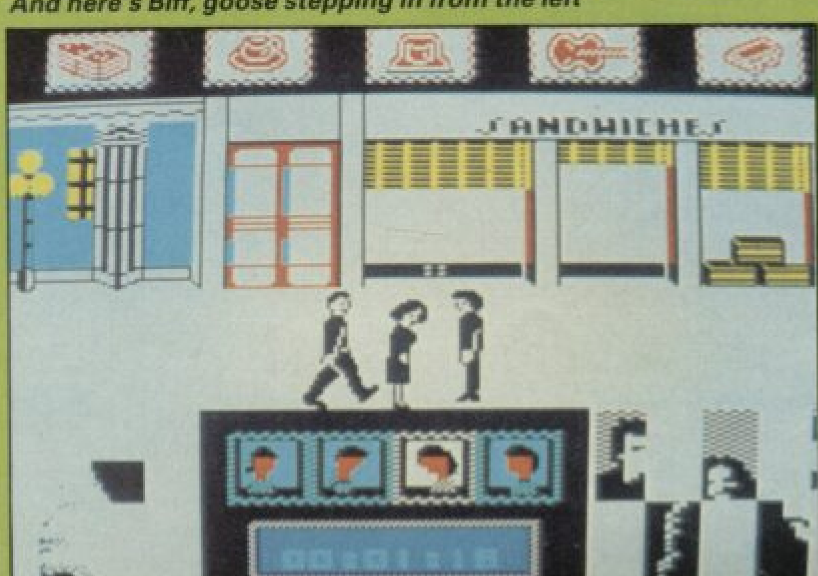
may be slightly better than those in **Friday 13th**, but at heart this shows all the same failings of game play and lack of sophistication.

I can't see those who enjoyed the film having good memories revived by this. **Back to the Future?** Back to the ZX81 more like!

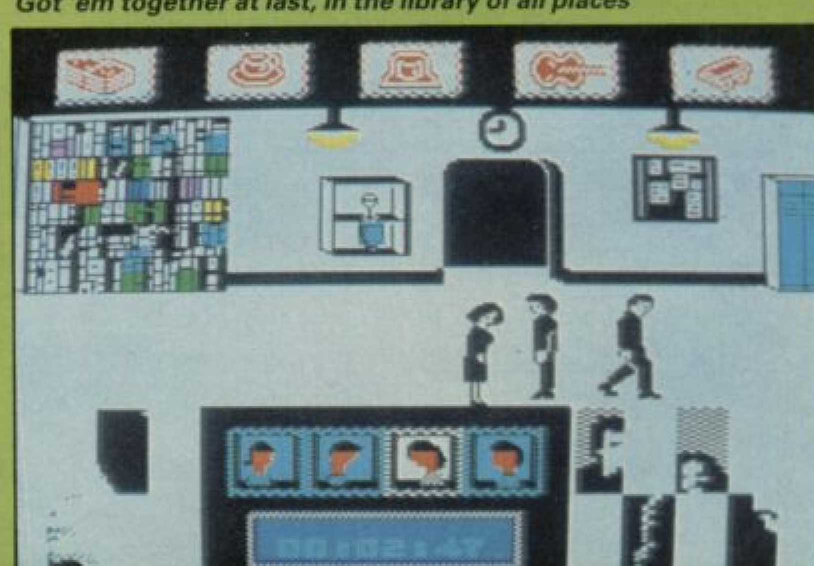
Jerry Muir

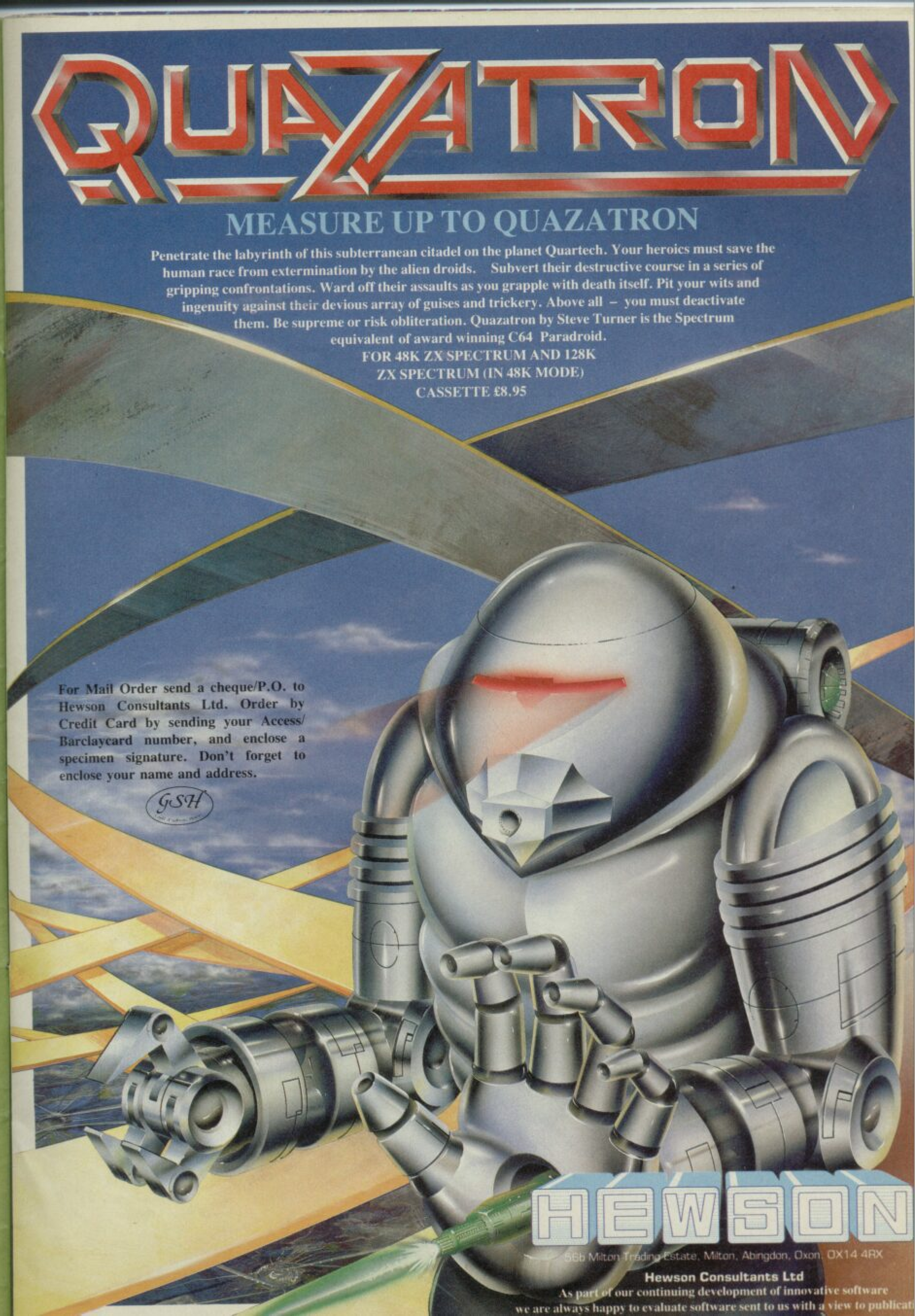
Publisher Electric Dreams
Programmer Martin Walker
Price £9.95 **Memory** 48K
Joystick Kempston
★★

Outside the coffee shop with the photo of Marty fading away. And here's Biff, goose stepping in from the left



Got 'em together at last, in the library of all places




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Bounces

IMAGINE A GAME like squash only the ball is allowed to rebound from above you as well as in front. And imagine that you don't use a racket, but a sort of scoop in which you catch the ball then shoot it out. Imagine also that facing you is an armoured opponent, and he's hell bent on preventing you from firing that projectile through one of the small holes in the ceiling above him.

Now this is where it gets weird, because you are wearing roller skates and, to make matters worse, the elastic of your trousers seems to have got caught on the wall behind you and keeps dragging you back. Meanwhile, nobody's going to stop the behemoth opposite doing you GBH so you'd better be prepared to get involved in some body contact sport. Imagined all of that? Then you've imagined **Bounces** — Deadly Sport of the Future.

SOFTWARE 5

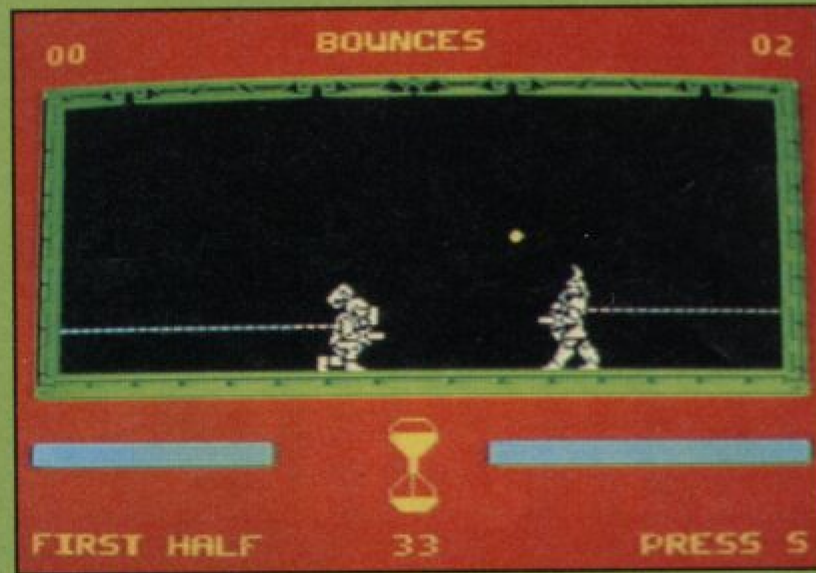
Or to put it another way, you've imagined the new game from Denton Designs, home of original gameplay. **Bounces**, rather like *Rollerball*, is a sport devised by the corporations of some unspecified future, in which clone warriors battle it out in the arena. Two of the most famous contenders are Sir Ashley Trueblood, all-round good guy and representative of the Knight-Techni-Corp, and Erik the Red, the guy you love to hate from the Viking-Synthi-Corp.

Being an upright Spectrum owner, it's presumed that you'll want to control Ashley — corrupt Commodore types being given the option on Erik. You'll have to choose one of two skill levels though, as well as a one or two player game and, of course, the control mode.

A word of warning about the controls. At first I tried the keyboard and found the line of keys one to five illogical and clumsy. Switching over to a joystick made an immediate improvement and within no time actions had become second nature. The ratings therefore represent the game using a joystick. If you've not got one — forget it!

You'll need to master the controls, not because they're complex, but because you'll have to react with extreme accuracy of timing and placing. Forward takes you towards Erik and back returns you to the wall, accelerated by the Plas-flex wire. Down takes you into a crouch which stabilises your position, thanks to your Fric-toe caps, while up gets you off the floor or makes you jump — once you leave terra firma you'll really fly back towards the wall.

Pressing fire transfers control to Ashley's arm so that you can intercept the Low-grav slugdomium sphere as it ricochets around. Once you've got it, aim the arm then release the button to let fly. Obviously, this means that the only movement possible when in possession is backwards, dragged by the Plas-flex, so position yourself carefully beforehand.



Sir Ashley crouches to maintain his position as Erik prepares to take the ball

Scoring is achieved in two ways. The gentlemanly way is to score goals by blasting the sphere through the holes in the ceiling above your opponent — the closer to the back wall, the higher your score. The ball then runs along a channel to the centre to drop back into play. But if you don't fancy a good clean fight, go for a good dirty one!

Hitting your opponent with a speeding sphere will topple him unless he's lucky enough to intercept it. Or you can get in close and batter him with your ball snatcher. Either way you'll get points.

Be on your guard though, or you'll end up scoring own goals. Putting the ball through one of the holes on your side adds to Erik's score, as does allowing the elastic to smash you against the back wall. These impacts can bring the game to an abrupt end in another way. Each time you hit the ground or get knocked over you lose strength. Although you do recoup some of this, too many crashes will kill you.

Each game lasts only three minutes, divided into two halves, but the action is fast, frantic and continuous. At the end of a game — providing you survive — your points will be added to your previous total and a tally of wins and losses is kept. Then it's on to the next battle of these giants of the arena.

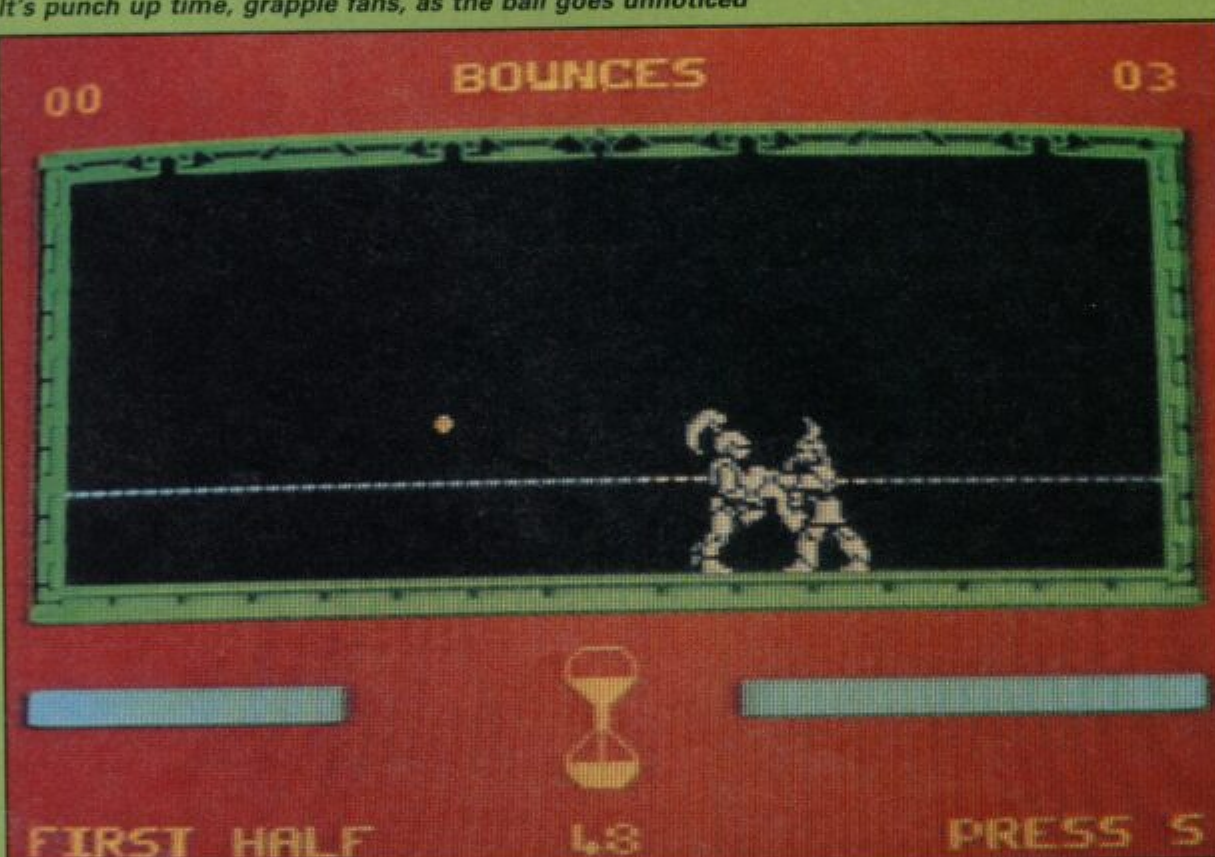
While **Bounces** looks graphically rather plain, apart from the well animated, solid looking figures, it soon has you hooked. It's not an easy game to play, but even at the start you'll want to persist and pretty soon you'll find the points margins are shrinking and you're even drawing games. In fact, it's just like learning a real sport and mastering its techniques. You'll also find that you develop various strategies of play, balancing the aggressive with the restrained, attack and defence.

Erik is carefully programmed to provide stiff competition, though on the easiest level he is rather more forgiving. He too has his strategies; one particular favourite seems to be knocking you over with the ball, catching it on the rebound and firing at your ceiling while you're still getting up. This all adds to the addictive quality of the game, and should give it a good lifespan.

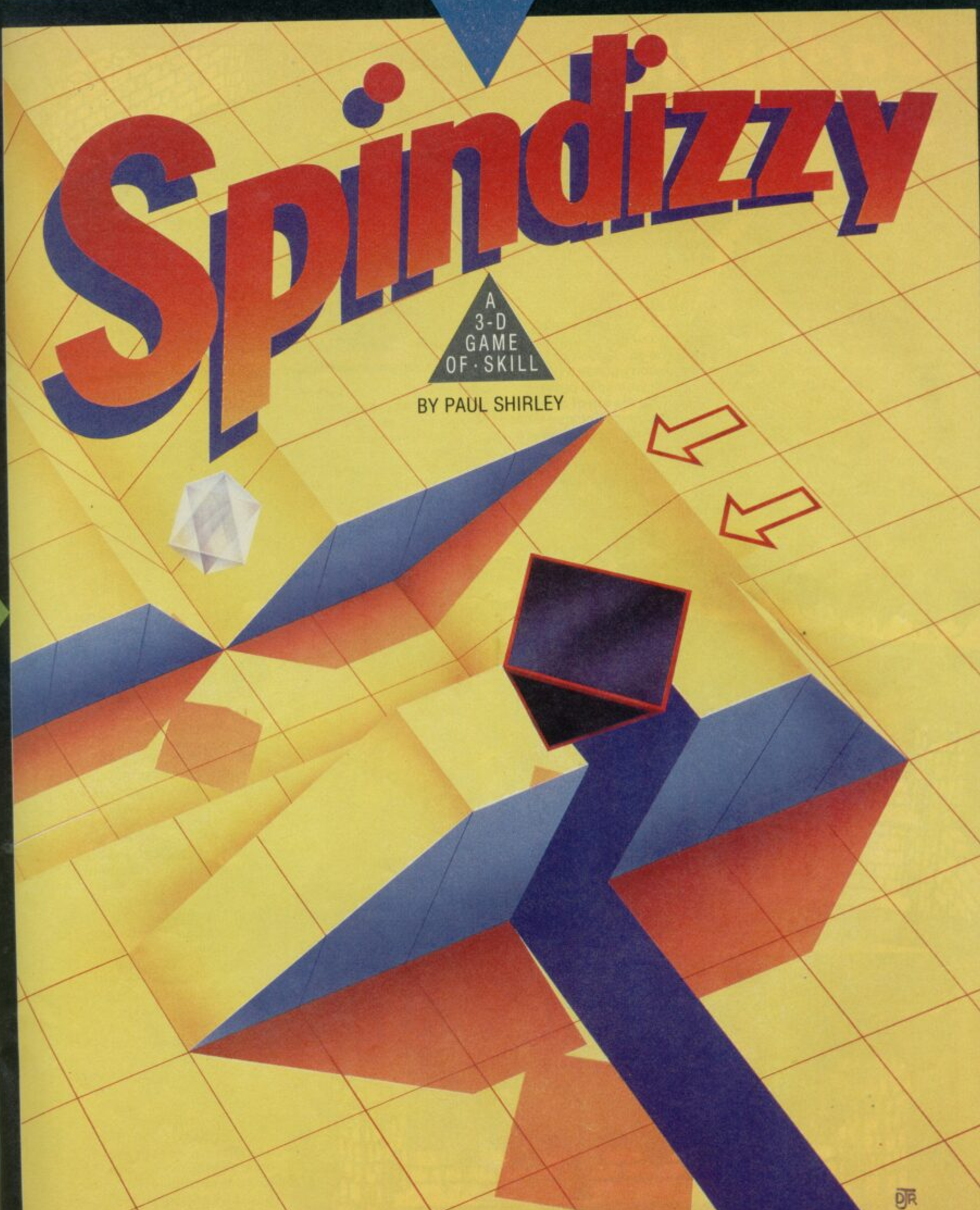
Congratulations then, Denton, for inventing an original game with admirably simple rules, that avoids being yet another contribution to the spate of martial arts simulations. If you've got any interest in this type of game you should enjoy it. It certainly puts the bounce back into Spectrum sports!

Jerry Muir

It's punch up time, grapple fans, as the ball goes unnoticed



Publisher Monolith
Price £9.95 **Memory** 48K
Joystick Fuller, Kempston, Sinclair, Protek
★★★★★



Electric Dreams
SOFTWARE

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MULTI-SCREEN SHOT
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Sodov the Sorcerer

DRAGONS ARE partial to a bit of apprentice meat so, Sodov, you must take care of your three young 'uns.

As chief sorcerer of the castle you have your own reasons for seducing the dragons into the locale, but just remember not to let the dragons make a meal of your assistants. After all, who would stir the cauldron of power on the ground floor of the castle while you shout the magic word to turn the dragons into gold?

That word — which I am under pain of death not to reveal — is aimed at the dragons using a cross-hair cursor and your joystick or keyboard controls. Pressing fire — if you're on target — will transmute the dragon into a fountain of gold.

You must destroy as many of the creatures as you can for two reasons. Each time you kill a dragon more gold is scattered upon the ground. Also, if dragons escape your spells they will start to lift the castle's portcullis and one of them will storm in to sieze the hapless and defenceless tyro.

Surprisingly, you must let this kidnap occur if you want to gather the gold which has accumulated outside the castle. You boost your spell power by travelling to the top of one of the towers. Once boosted to a full 50 spell points you can go to the ground floor of the castle and wait for the dragon raid.

At any moment a dragon will rush in, grab your apprentice and storm out. Don't spell him while he's in the castle as the portcullis will shut and you'll have lost your chance to gather gold for another round.



If you can stay your impatience, follow the dragon into the outside walls and lay a mine for him by positioning the spell cursor so that he walks over it. The gold flies and the apprentice is free for you to take back to the castle. Quick, though, as the dragons have fiery tongues and there is a chance of recapture. If you're lucky — or skilful — you will be able to pick up some gold dust from the ground on the way.

Once you have a certain amount of gold you can progress to the next level of the game in which the dragons change colour and get more nimble on their feet. At that pace you can do little else but concentrate on the attack from the battlements of the castle. Beware the little red spider which can enter the castle under the portcullis and attack you at any time.

The spider is an undead creature and requires power to sustain its grubby little existence. It steals its power from you and forces you to replace your energy with a trip to the tower.

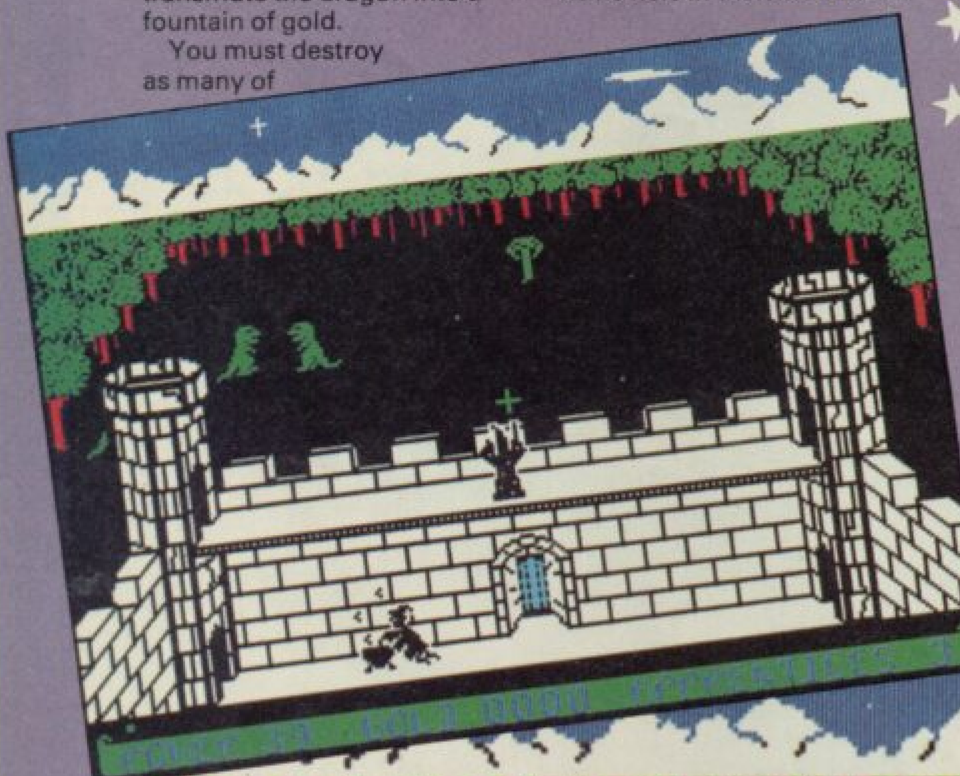
Energy is also lost during sudden thunderstorms when the game's token cloud shoots lightning at Sodov. Again, because this game is full of pretty gold and nothing so loathsome as death, all you need to do is take yet another trip up the tower.

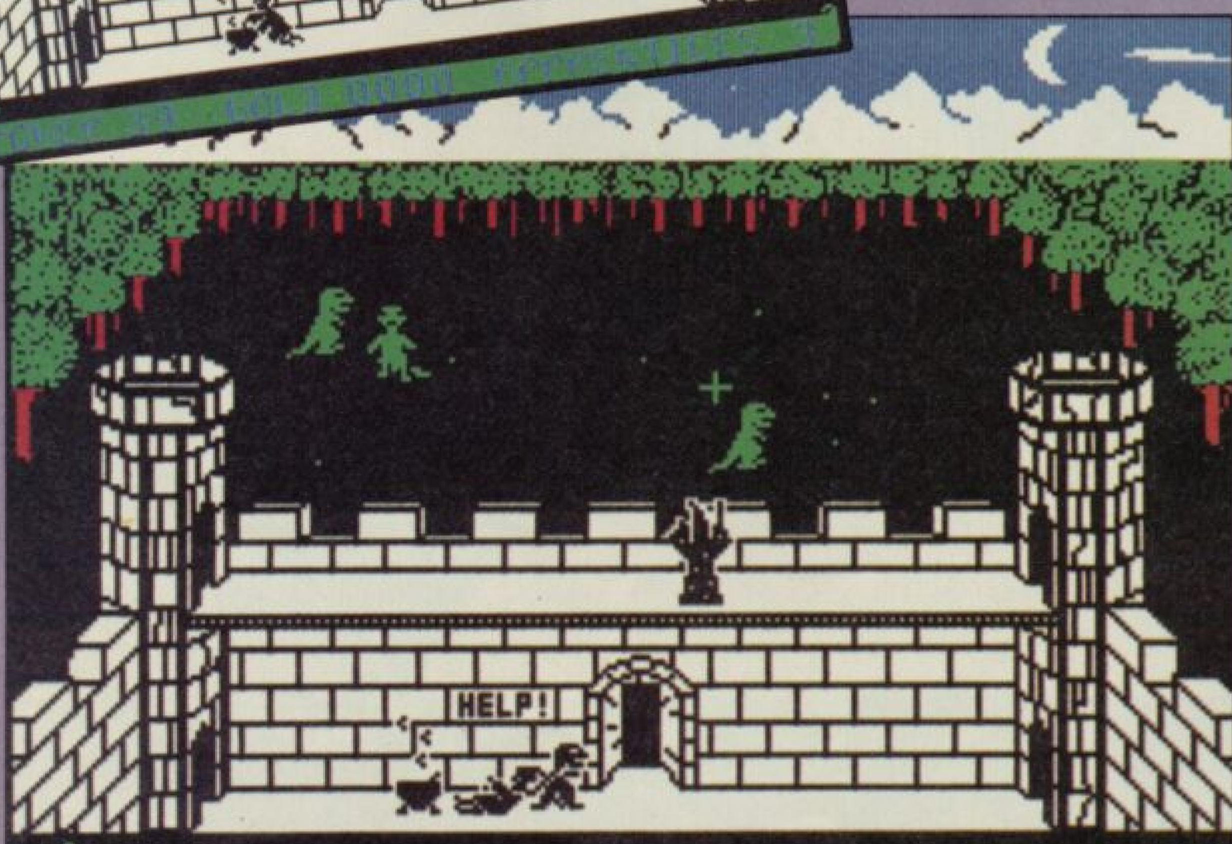
The game finishes either when all your apprentices have been kidnapped by the dragons, or when you have become a fried magus. In keeping with its magical attitude of not killing off sorcerers or tyros, the game does not have to be restarted. You are reincarnated with no power, no gold and a zero score.

Sodov the Sorcerer, despite having only two screens, is one of the best games I have seen this year — either in the full price or budget range. The graphics are smooth and entertaining, the concept is new to the Spectrum and the plot has at least three strands to it. It is an enchanting game of which you are unlikely to get tired.

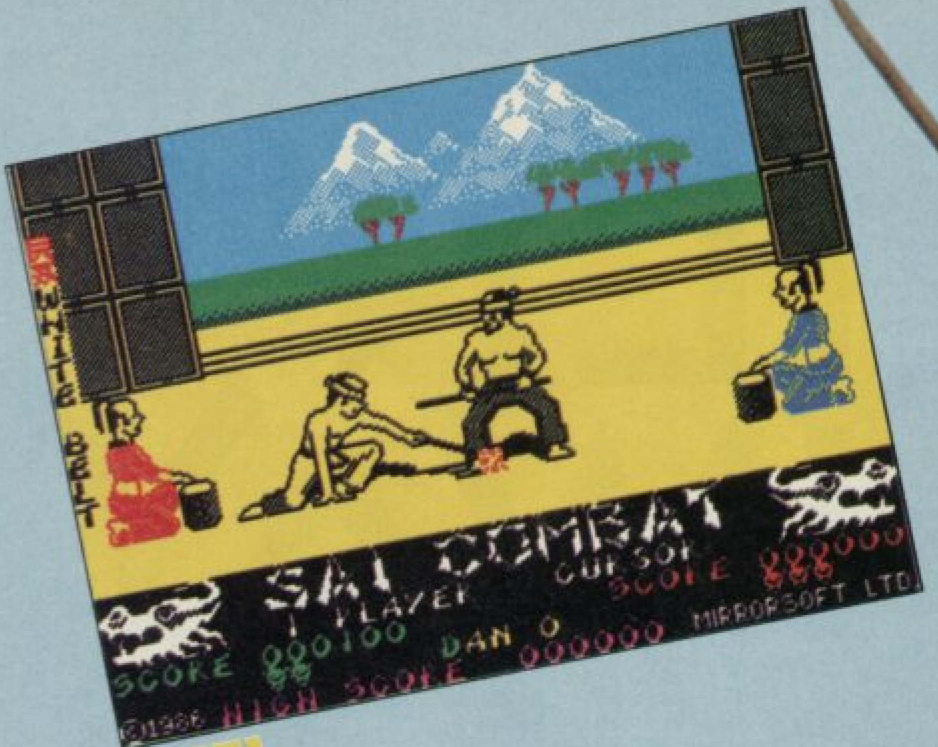
John Gilbert

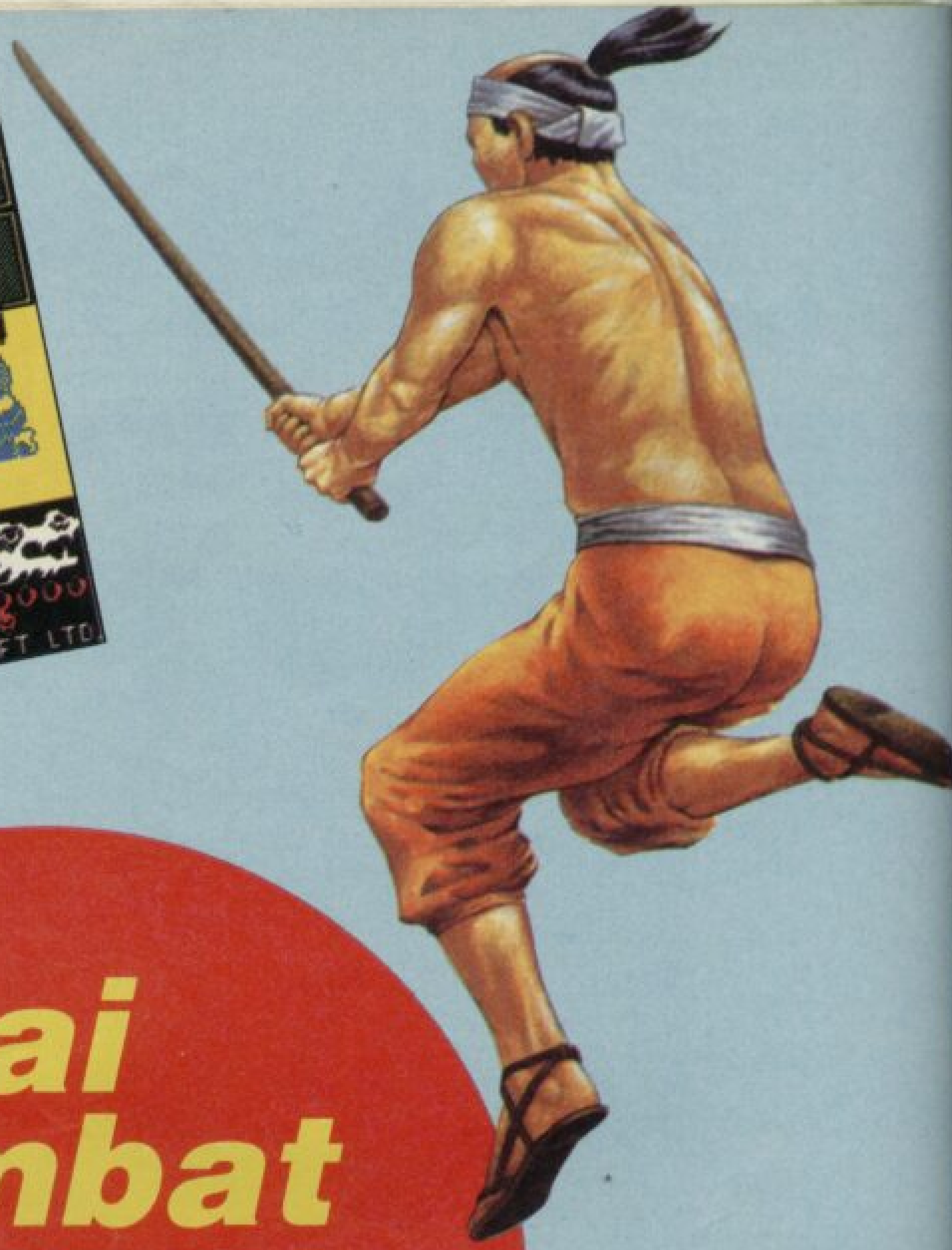
SOFT 5 WARE





Publisher Bug-Byte
Price £2.95
Memory 48K
Joystick Kempston, Interface II
★★★★★





SOFT 5 WARE

Sai Combat

YOU'VE SEEN it done with fists, you've seen it done with feet, now do it with whacking great long poles.

Sai Combat is similar to karate but the combatants use long poles — rather like those used by Robin Hood and his merry men. In real life the initiates of this ancient oriental art use short poles with carefully sharpened scythes at each end. They do not appear in the Mirrorsoft game, but that is not surprising as any extra detail on the screen, either in the animated figures or background, would make it almost impossible to see what was happening.

You start the game with a plain white belt and work up through 16 coloured belts, followed by eight gradings. A joystick is a necessity if you want to progress further than the second grade yellow belt.

A combination of all eight joystick directions, with and without the fire button applied, will be needed if you are to get the full potential out of your oriental warrior. Most of your opponents are a knockover if you remain on the button. You should, however, keep an eye on your Chi energy levels, depicted by a dragon which goes green as you get weaker.

And you should be particularly careful in the higher climes of the game when Ninjas arrive on the scene. These deadly fighting machines can have you on the floor with one or two blows.

There are three categories of movement — the stab, the kick and evasive manoeuvres.

Stabbing is done with the Sai and blows can be delivered to the chest, belly and shins — although my player went for the toes most of the time. The chest and belly blows are the most effective, while shin taps are worse than useless as it is difficult to get close to your opponent.

The high kick is also very effective, especially when delivered to your opponent's chin. The chin blow is extremely hard to block and will send the recipient to the ground very quickly. You can also twist your body and do a backward kick but that move does not usually have much effect, especially on the more skilful opponents waiting to be encountered in the higher levels of the game.

Evasive movements consist of backward and forward somersaults which, when combined with stabs and kicks, form deadly offensive moves — even computerised opponents can be taken by surprise. You can also jump into the air and duck to avoid stabbing blows, while at the same time delivering them.

Sai Combat beats all the martial arts simulations on the market, which include Melbourne House's Way of the Exploding Fist — the original karate simulation — and International Karate from System 3 — although that was late and heavily hyped, it proved to be an excellent simulation.



The game is a delight to watch as the figures leap, twirl and spin their sticks in almost balletic fashion.

Mirrorsoft's simulation contains smoother and more detailed action than the other games, and is set against colourful and atmospheric oriental backdrops, both inside and outside the initiates' temple.

It is a pity that Mirrorsoft could not make the sticks in the game look more like Sai weapons of this ancient art.

However, I am willing to forgive Mirrorsoft as it is easier to program a straight line than a curved one — as in the Sai scythe.

I think this is too good a game to be damned through such an error which, on the whole, makes the graphics less cluttered.

John Gilbert

Publisher Mirrorsoft
Price £6.95
Memory 48K
Joystick Kempston, Interface II, cursor
★★★★★

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Bombjack



LICENSING deals from the amusement arcades are thinner on the ground than they used to be. Elite, however, has found an excellent title in **Bombjack,** and the game as seen on the Spectrum is virtually identical to the original arcade hit.

The scenario is about as inane as a scenario can be and completely irrelevant to the game. You guide a little man with a Batman cape around the screen collecting bombs and avoiding the monsters. It's about as simple as you can get without being utterly trivial, but nonetheless addictive for all that.

Jack — for it is he — moves left and right, and jumps from platform to platform using the up, down and fire keys. Fire is the basic jump, fire with the joystick pressed forward gives a rather higher jump — the full height of the screen — and down halts a jump. You can also swing left and right while jumping, although the amount of sideways motion is limited.

Graphics and speed are everything in games like this, and Elite has done a good job on both. There are six background scenes, done as hi-resolution screens. You start with a view of the Sphinx and pyramids, move on to a Grecian temple, then to a Gothic castle, skyscrapers, classical buildings and an open plain by night. On those screens are superimposed a few platforms to help Jack in his efforts to dodge the nasties, and also to hinder him from jumping the full height of the screen where the way is blocked by a platform.

The monsters come in various shapes and sizes. There is a creature which seems to be a giant flea and is very nasty, moving semi-purposefully, but slowly, all over the screen. Spacemen start on platforms at the top of the screen and slowly fall off them to the bottom where they turn into creepy crawlies with spiral shells. Don't ask me what they are — poisonous snails perhaps, or some sort of exotic chrysalis. As spacemen they are easy enough to avoid, but after a while the snails tend to pile up and make life difficult if you need to run round the bottom of the screen.





They also have a habit of turning into mines which roll along the bottom looking for trouble, and later on in the game, or if you spend too long on a single screen, you will come under the dreaded flying saucer attack. These horrors move unpredictably and sometimes at great speed, and should be avoided at all costs.

Fortunately, there are three types of spinning disc to come to your aid. The most frequent, and useful, is marked P and freezes all the monsters on the screen for a short period. They can then be destroyed, rather in the manner of a Pacman with a power pill, which enables you to get to clogged-up corners of the screen to collect isolated bombs. The B disc doubles the score for the screen, and the E disc gives you an extra life, although it doesn't appear frequently, and turns into a B disc if you don't catch it quickly enough.

Flyer Fox

"FIGHTERS attacking!" yelps the Spectrum sound chip — a sound to curdle the blood and freeze the marrow.

When you've got the message, and it's not easy to ignore, you must stand — well, sit — ready to repulse airbourne attacks on the airliner which you are protecting. As the enemy aircraft swarm in, line them up in your sights and fire a batch of twin missiles.

Your targets are not dumb, however, and will veer away as soon as you let loose. Not to worry, remain calm and keep firing. You have a never-ending supply of missiles, which is fortunate because your controls are on a hair-trigger. The fighter will swerve violently off course if you give the controls the lightest of tweaks.

If you're serious about protecting the VIP passengers you should keep the airliner in view through the large window on the display. It always travels north so, if you get lost during a dog fight, you can use your compass to put you back on course.

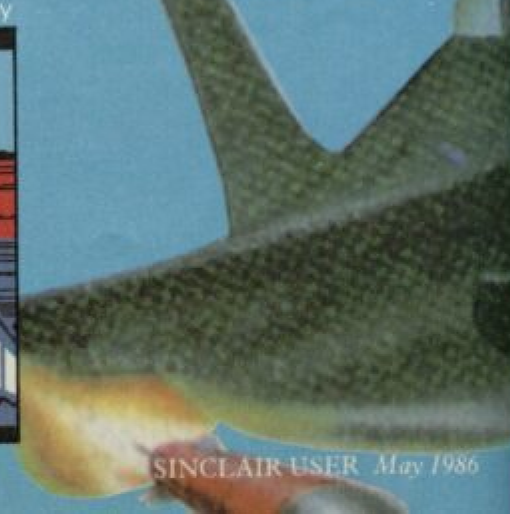
SOFT 3 WARE



The compass is supplemented by an artificial horizon which shows whether you are ascending or descending, and the angle at which you tip your wings when you turn the fighter. A radar display, bottom left, shows the position of the raiders as they advance on the airliner.

Despite the array of navigational instruments **Flyer Fox** is far from my idea of a simulation. You are automatically taken into the sky where the airliner is awaiting your protection, and you have no control over the speed of your fighter. Your flight ceiling is also pre-set at an altitude of 19553 feet — the height at which the airliner flies — and can go no higher.

Your job is more difficult than that of the enemy fighters. You must protect the airliner, protect your own nose and tail, and







All these sprites are in black, but that is an advantage given the very detailed backgrounds. It ensures you can swiftly see what is going on which is vital in a very fast game, and also means there are no colour clashes. I found the black a little boring at first, but rapidly realised how necessary it was to make **Bombjack** playable. Once you're in the thick of things you barely notice the colour.

My ideas on tactics will no doubt be improved on when you've all had a chance to put in some practice. I've managed about eight screens — there are 30 at least, with each background scene having five configurations of platforms imposed on it. One very useful tip — the spacemen always seem to appear first on the top left-hand platform. If you can get to that immediately at the beginning of each screen, wipe up the bombs and you won't have to worry about holding out for a P disc. It's usually very difficult to get to that platform once the spacemen have started materialising.

Bombs with lit fuses are worth much more than bombs without, and if you wait until they are lit and collect 20 or more on a single screen you amass enormous bonuses — 10,000 for 20 rising to 50,000 for 23. However, it's not worth hanging around for this opportunity unless you're very skilled, as the screen will soon be a crawling mass of monsters. Just clear them away as quickly as possible and leave the real task until you're familiar with the game.

Stay away from the giant fleas — they have an unnerving habit of altering course in your direction as you pass by them, and can also pass through platforms, so you are not safe behind your barrier.

The best general tactic is to take out the bombs at the top left-hand corner, then clear up the bottom of the screen before the spacemen get there and start filling it with mines and snails. When a P disc appears take out the monsters close to the bombs, but be careful about the time limit — don't get yourself trapped if they suddenly come back to life. And make sure you get the flying saucers, if there are any, and the fleas — they are your main enemy.

Bombjack is great fun, slickly executed and totally addictive within its limitations — a sort of unpredictable **Chuckie Egg** with shades of **Pacman** in free-fall. The rating reflects the simplicity of the game rather than its fun element — it is unlikely to be something you come back to week after week, and I suspect hardened zappers will find it a shade too easy to grip their attention.

For newcomers to the Spectrum, and anyone who doesn't remember or still glories in the grand old days of **Arcadia** or **Penetrator,** this arcade nonsense is excellent material for a wet afternoon, when you can work off your frustration on a plain old hi-score contest with a few friends. *Chris Bourne*

Publisher Elite
Price £7.95
Memory 48K
Joystick Kempston, Sinclair, cursor
★★★★

chase away any bandits. A display at the bottom of the screen gives your status and informs you when you are low on fuel or damaged.

There are six levels of play, all of which look the same, with no great increase in difficulty. You cannot select the level at which you enter the game, but must progress steadily through each reaching a set score before moving on. Your fuel will be replenished at each new level, though any damage sustained will not be repaired. The bandits don't get any nastier, so your main lookout is keeping the damage status healthy. I reached level four in a very short time.

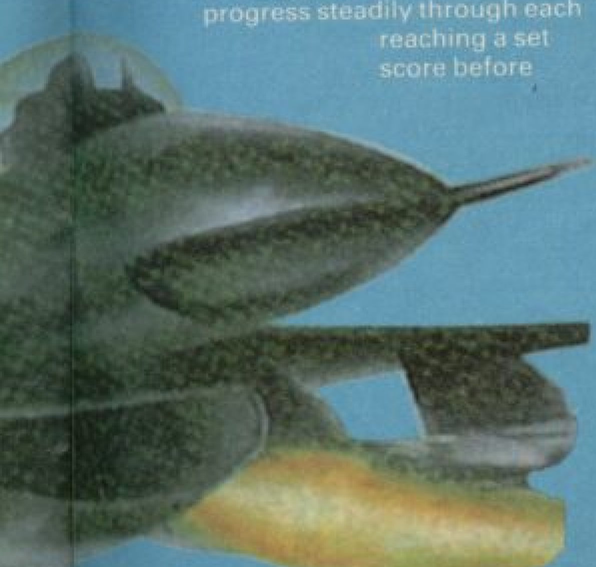
At £2.95 **Flyer Fox** has a lot going for it — well some things, at least. It does have a limited variety of 3D graphics and the speech is fascinating for at least half an hour — although after that it does want to make you rip your Spectrum out by the roots and find the nearest bucket of water.

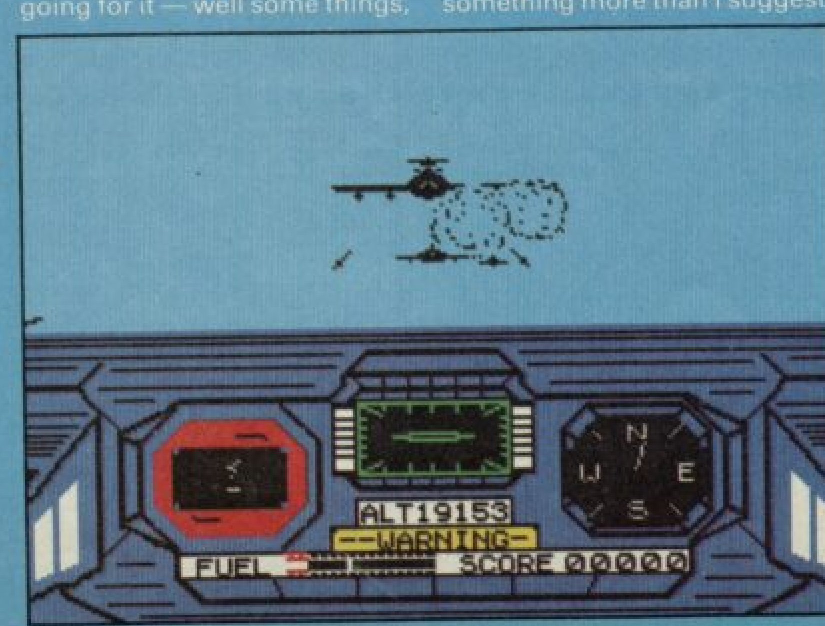
It's a reasonable shoot 'em up, but if you're looking for something more than I suggest you fly Psion's **Flight Simulator, Fighter Pilot** from Digital Integration or perhaps even **Skyfox** from Ariolasoft. After all, if you're looking for something like a flight simulator it's quality you'll want.

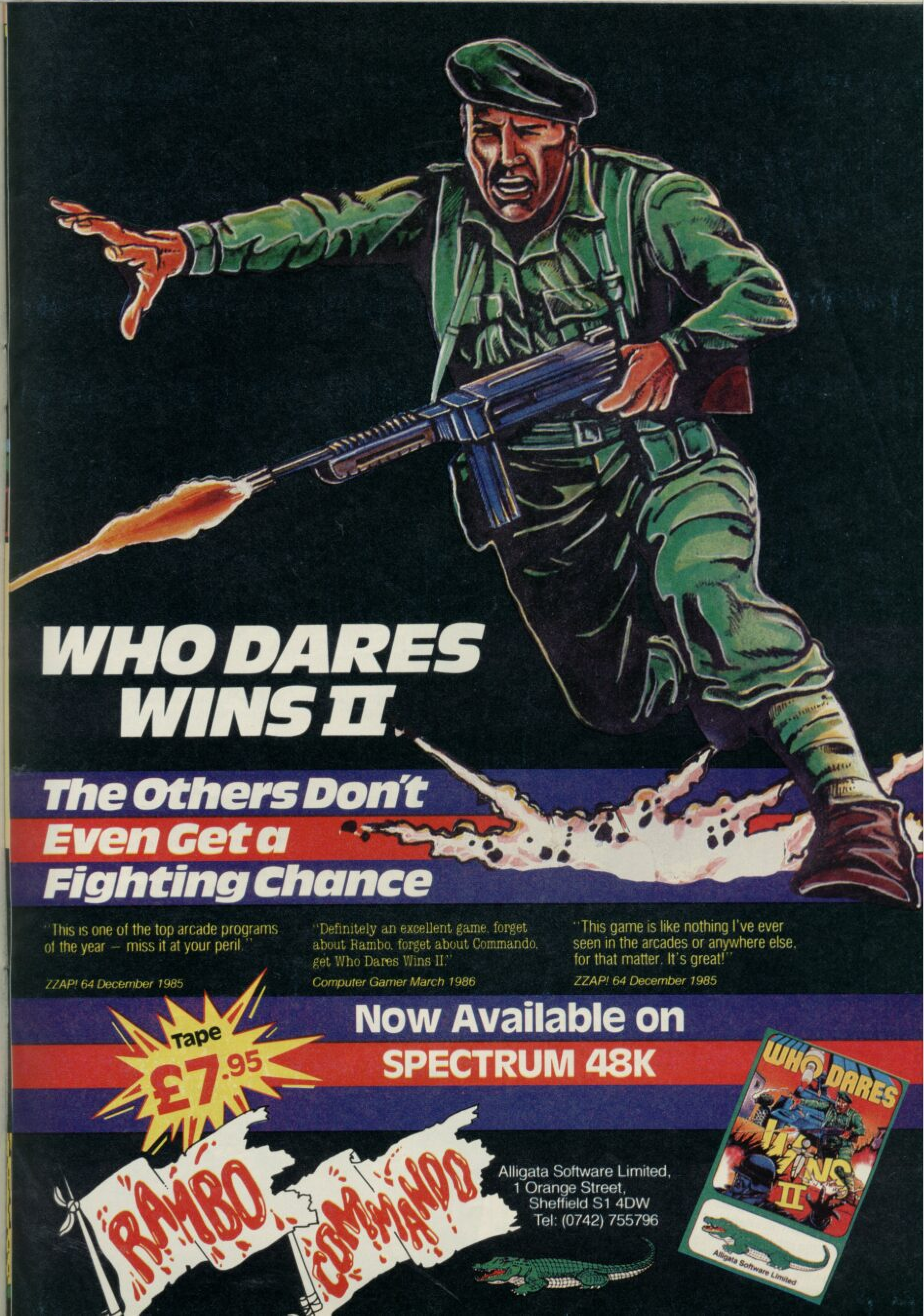
In some ways **Flyer Fox** is an aerial version of US Gold's **Beach Head.** The emphasis is on watching the pretty rockets fly rather than staying in the air or avoiding the bandits. If **Flyer Fox** was involved in giving real aerial support during a time of war, with the restraints on manoeuvrability, it wouldn't stand a chance.

John Gilbert

Publisher Bug Byte
Programmers Tymore
Price £2.95
Memory 48K
Joystick Kempston, Interface II
★★★






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To: Sinclair User
ID: 919995924
Subject: Max Headroom

I HAVE received the Maxhunter cassette from Quicksilva. I am instructed to recover the Max personality module from the Network offices. It contains his missing brain circuits and, until it is safely back with Max, the robotic video star will be unable to stutter through his show.

The building has 211 floors which makes it a daunting task to search. However, instructions provided with the cassette indicate that only the top 11 floors are of any significance. All floors are currently under the control of Tim Bryce, head of research, via the Network computer. Security systems abound, and it is necessary to break the codes before access to the appropriate floors can be achieved.

The first problem is the lift. I shall attempt to decipher the instructions for operating this and report back when I achieve progress.

By the way, what is my expense account clearance for this operation?

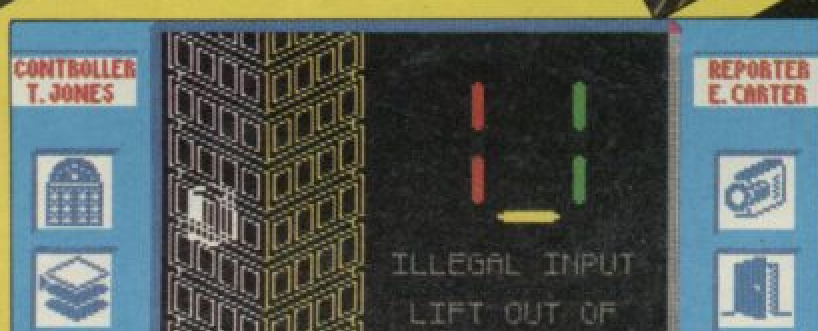
From: *Review agent 'Lunchbreaks' Bourne*

SOFT 3 WARE

Max Headroom







To: Sinclair User
ID: 919995924
Subject: Lift operation

FLOORS are accessed from the lift. However, only floors 200 to 211 can be controlled by the player, and even then the correct codes must be entered. The display conforms to standard LCD calculator digits. Floor 200 is accessed by the letter E and the appropriate segments of the display must be lit to form that letter.

Using the joystick to move a pointer along a row of circuit lines, I am able to activate the various segments. However, each segment remains lit for only a limited period, and I must continually recharge each one. It's no good just lighting up the whole E once — the letter must be lit when the time limit on this operation runs out.

The first attempt fails and the lift, out of control, deposits me on floor 76. This is of no use to anyone.

There are two lift shafts in the building, and to re-enter the lift I must use the other shaft each time. That means crossing the room which is guarded by unfriendly security robots. I shall report on the room graphics as soon as you answer my queries on expenses.

From: *Review agent 'Lunchbreaks' Bourne*

To: Sinclair User
ID: 919995924
Subject: Room graphics

EACH FLOOR has an identical layout of rooms, but different furniture is put into each for the sake of visual variety. In fact, you can do nothing with the furniture anyway, it is only there for show.

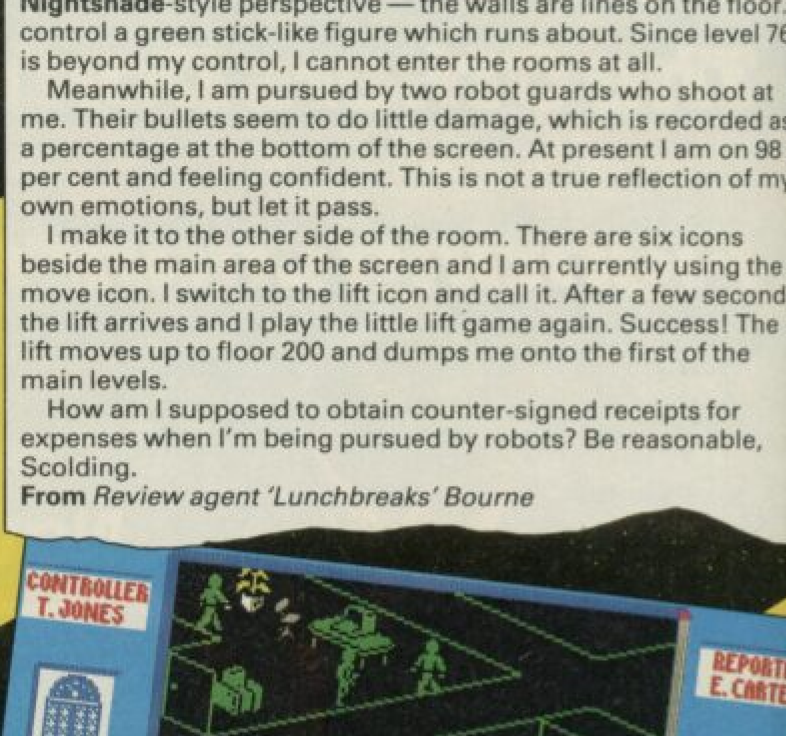
The floor is spread over about six screens with a **Nightshade**-style perspective — the walls are lines on the floor. I control a green stick-like figure which runs about. Since level 76 is beyond my control, I cannot enter the rooms at all.

Meanwhile, I am pursued by two robot guards who shoot at me. Their bullets seem to do little damage, which is recorded as a percentage at the bottom of the screen. At present I am on 98 per cent and feeling confident. This is not a true reflection of my own emotions, but let it pass.

I make it to the other side of the room. There are six icons beside the main area of the screen and I am currently using the move icon. I switch to the lift icon and call it. After a few seconds the lift arrives and I play the little lift game again. Success! The lift moves up to floor 200 and dumps me onto the first of the main levels.

How am I supposed to obtain counter-signed receipts for expenses when I'm being pursued by robots? Be reasonable, Scolding.

From *Review agent 'Lunchbreaks' Bourne*



To: Sinclair User
ID: 919995924
Subject: Code search

ONCE in room 200 I have to gain control of the floor. One of the icons allows me to play the code game. First I set an icon at the bottom to the required floor number, in this case 200. I then select the code game icon. A sequence of flashing lights is displayed against a picture of a chip. I must enter these lights in reverse order to gain access to all the rooms on that floor.

The lights are swift but, fortified by my success with the lift, I have no trouble entering the sequence.

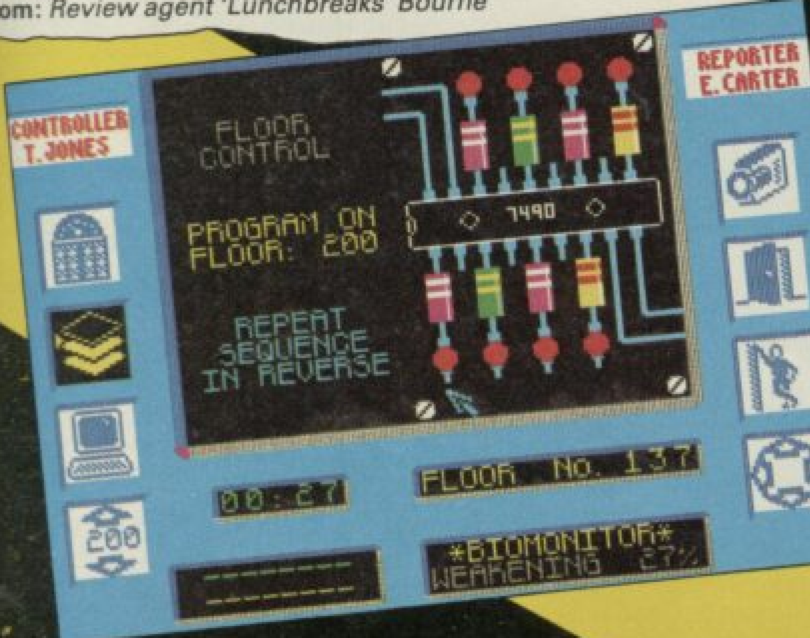
More robots seek to destroy me, and when they get close they do a lot of damage. The robots cannot follow me into rooms, however, so I take refuge in one and hit the rest icon. That allows me to regain energy at the expense of time — the whole mission must be completed within six hours.

As each room is entered, it is searched for elements of the special code to the president's office. As these are found they are recorded on the display — there are four such codes hidden over floors 200 to 209. Since they have different positions in each game search is a repetitive and time-consuming job.

I find no codes on floor 200 and proceed to the lift. The codes for the other floors are provided in the instructions — they consist of the final digits of the number, 1 being the code for floor 201, and so on. The presidential office, however, cannot be entered unless the complete series of codes has been entered, and the laboratory, where the Max module is kept, can be entered only with information gained from the president's office.

Since you are being so stubborn about expenses, I am terminating the mission at this point and will report back with my impressions in person.

From: *Review agent 'Lunchbreaks' Bourne*



To: The Publishers
ID: 666
Subject: The Lunchbreaks Report

AGENT LUNCHBREAKS was debriefed under sodium pentothal according to EMAP Review Policy, clause 4c. He praised the general presentation of the **Max Headroom** game and believes the concepts to be original and interesting. He was particularly impressed by the lift game, which is both difficult and unusual.

The graphical representation of rooms is good, but becomes tedious after the complex instructions for entering them are understood. The fact that 199 floors out of 211 are completely useless to the game is a substantial criticism.

We understand that if the game is finally completed, a special message from Max with speech and animation can be loaded from side two of the cassette. That is a bonus, but the amount of repetitive work to be done before completing the game is boring.

Lunchbreaks is sure the game will appeal to many fans of Max, but points out that it could have been much more challenging by more intricate use of the code systems. As it is, all the difficult bits occur at the beginning when the player tries to understand the control systems. Once they are mastered the rest of the play holds little variety.

Lunchbreaks appears to have made a good recovery from his experiences in the Network offices. However, his extravagant attitude to company funds leads me to recommend that we terminate this agent's contract at the first available opportunity.

From: *Case officer Scolding*

Publisher Quicksilva **Programmers** Binary Design
Price £9.95 **Memory** 48K
Joystick Sinclair, Kempston, cursor
★★★

Crack It! Towers

THIS IS designed as an educational game, but in trying to make it suitable for all age groups, Mirrorsoft has made it not terribly suitable for anyone except puzzle fans — of which, of course, there are many, both in and out of classrooms.

The game starts in front of **Crack It! Towers**, which has eight numbered rooms. Collecting the golden keys to be found in each of the first seven rooms allows access to the eighth where the final puzzle must be solved to win the game.

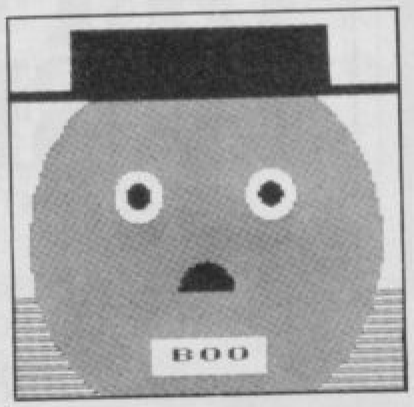
The seven rooms can be entered in any order, and each contains a different challenge, with an arithmetical or spelling problem or two along the way to provide the educational content.

Room one, for instance, contains a Hangman-type puzzle, in which the aim is to spell what Oswald the Duck wants for dinner in less than nine attempts. Room three has a simple subtraction sum and a series of answers appearing in rapid succession.

Pressing the space bar when the correct answer appears, automatically fires the laser gun with which the player attempts to shoot five bats.

In another room, the object is to complete number sequences to get past the sharks exercising in the castle swimming pool. There's also a spider-zapping game involving some multiplication sums, an anagram game, and a minefield game in which you have to calculate the number of steps you can take in any direction before hitting a mine.

In each room, completing the challenge successfully wins a



golden key, while failing it sends the player into the moat. There are also a number of extraneous hazards. If you fall into the moat, you are threatened by sharks unless you solve a sum in time. Occasionally, a green spider, a blue skull or a black bat will steal one of your keys, but on the other hand you might find a bonus key in the Maze of Skulls, unless you get blown up instead.

There are ghosts which hold you captive until you have filled in the missing letters of various words, and power failures which, as is their wont, can occur at any time: to get the lights back on, you must correctly spell a word that has briefly flashed onto the screen.

Crack It! Towers can be played on three levels of difficulty, and a fourth option allows teachers to change all the word problems in the game to give it a longer lease of life. Whichever level is chosen, the games remain the same, with only the sums and word problems being altered.

On the lowest level, there are sums like 3×1, while on the 'impossible' level (a gross exaggeration if ever there was one) the sums might involve the five times table and there are tricky words to spell like 'instinct' or 'receipt'.

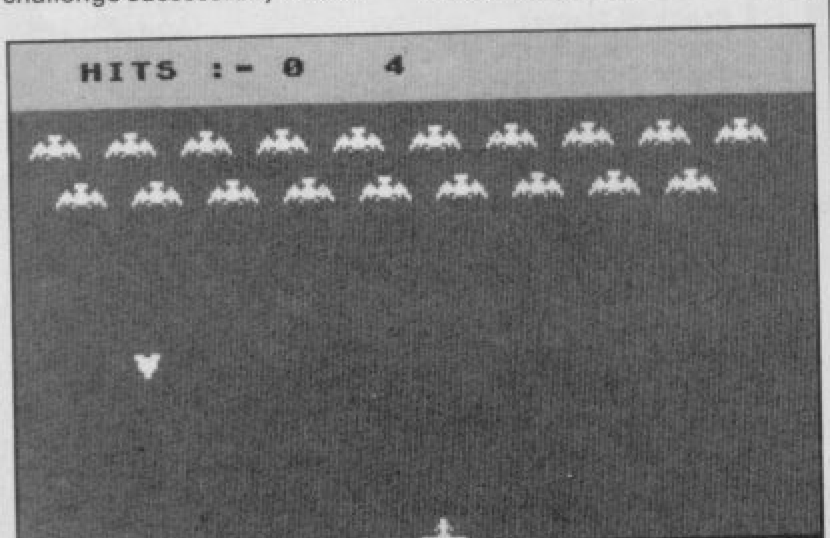
Thus the educational value consists purely in random drill tests to be completed against the clock. Because several of the games are quite hard to play compared with the sums to be answered, the program might well prove too frustrating for younger pupils, while not teaching enough to the older ones.

The game has rudimentary graphics, with not even a hint of a splash, for instance, when you fall into the moat, and some very unsophisticated shapes to represent spiders, people or bats. That, however, does not matter too much.

Crack It! Towers certainly has plenty of variety and ingenuity to while away a harmless hour or two, and no doubt the odd correct spelling or sum will be retained in enough memories to add a touch of usefulness too.

Nicole Segre

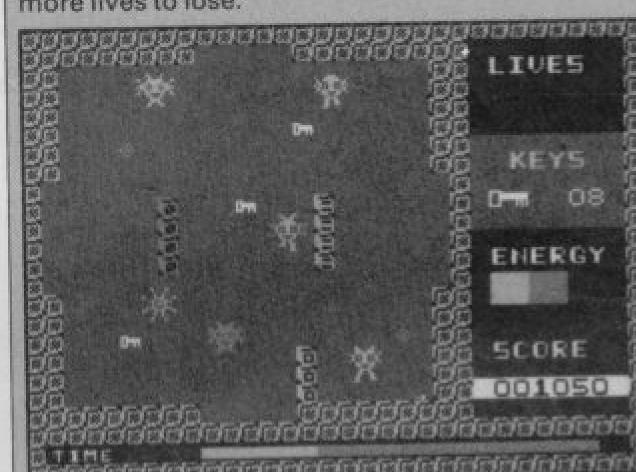
Publisher Mirrorsoft
Price £9.95 **Memory** 48K
★★★



Dungeon Dare

EXCITEMENT mounts. The green sprite is about to edge its way past a yellow one. They must not touch. Can you guide it through the narrow corridor?

Whew! Made it. Now where's that key? Spotting it in one corner you hurtle across the screen completely forgetting the danger. Splat! A blue sprite charges into you. Ah well, only two more lives to lose.



The title **Dungeon Dare** bears absolutely no resemblance to the game which is basic in the extreme. The graphics look as if they've just trooped out of the ark.

Try to pick up 46 keys which lie in 16 interconnecting rooms, patrolled by a number of sprites all moving on set paths. There is always enough room, if you time it right, to nip past these and pick up keys and jewels. The jewels regenerate your energy which disappears at an amazing rate.

There are two types of room. In the first your green sprite can move around freely, collecting objects and dodging others. The second leaves you with that horrible helpless feeling — you can move left and right along the ledges and platforms but not up and down. Consequently, as soon as you come to a gap you fall through it regardless of the alien sprite patrolling beneath you. If you time your fall you might be lucky and miss being zapped. Keys are almost impossible to collect on these screens unless you happen to drop past one.

Dungeon Dare must be completed before the time runs out — that is measured by a grid at the bottom of the screen and decreases very slowly. Fortunately, you are likely to be zapped long before the timer reaches zero.

Before you splurge out on this amazingly boring game, take a look at the packaging. The amateur attempt at design should set the warning bells ringing. There is no joystick control and the game is played with four keys — left, right, up and down. However, it must be said that though the graphics are mere hopping sprites, they do move swiftly with not a jerk between them.

Dungeon Dare is a waste of time and money, and is comparable to one of the more professional magazine listings. There are better games around.

Clare Edgeley

Publisher Central Solutions
Price £1.99 **Memory** 48K
★

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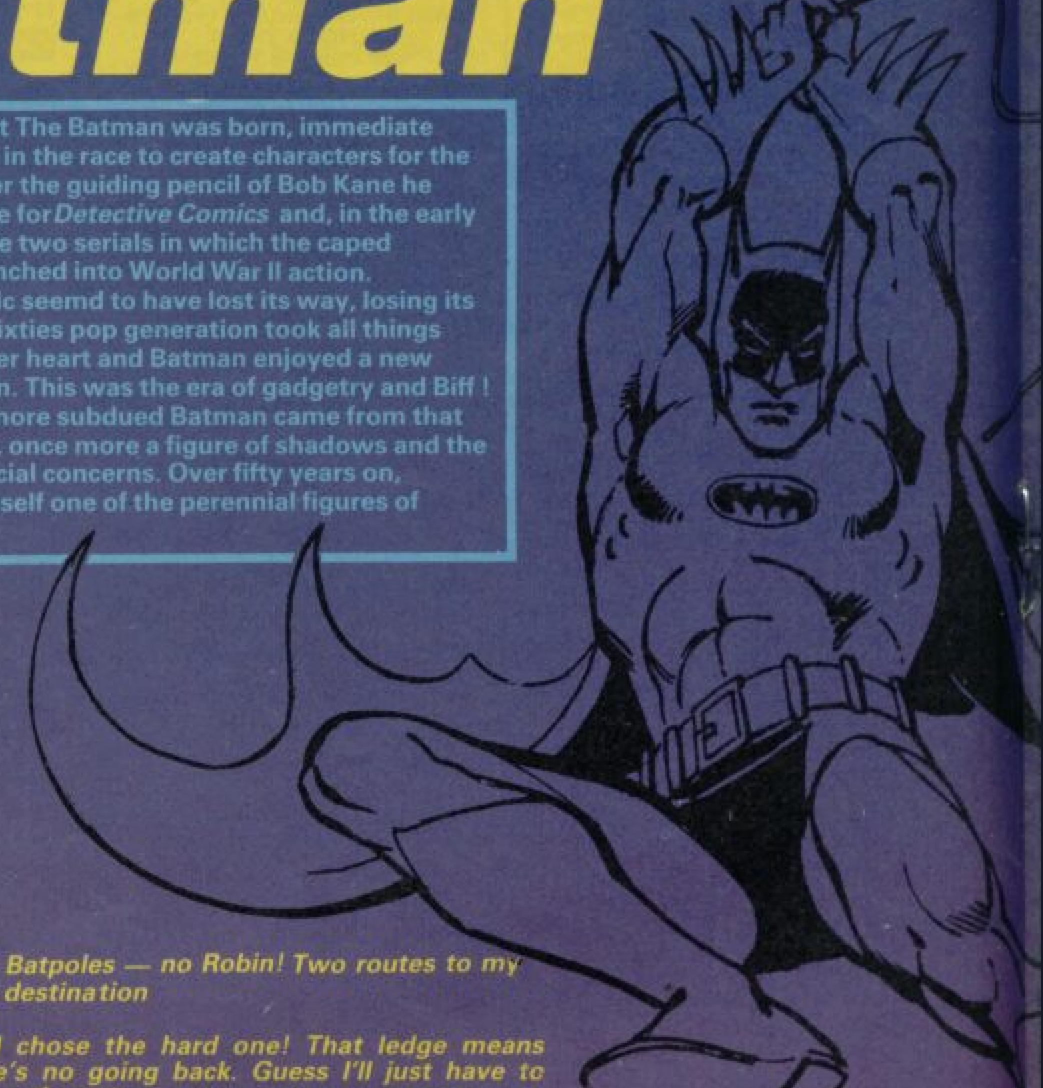
Batman

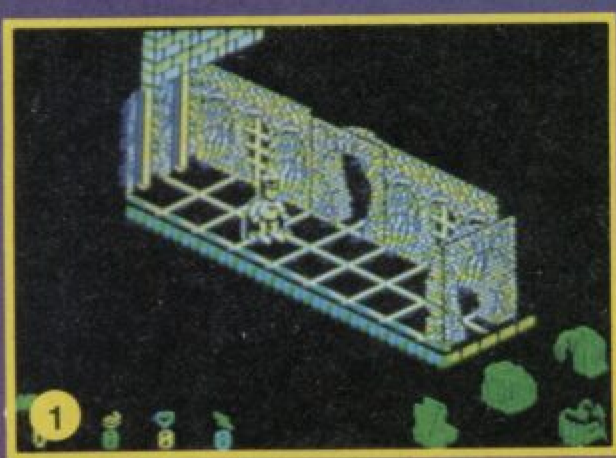
WHO DO YOU prefer, Batman or Superman? You can probably divide people psychologically by their choice. Superman — heroic, invincible, on the side of light. Batman — a figure of vengeance, lurking in the shadows; a mere mortal and, in the earliest adventures at least, morally ambiguous — more likely to throw a crook off a roof than fly him into jail. I always preferred Batman.

In terms of computer games you ain't got much choice, now that Beyond has discovered that their incarnation of the big blue and red hero won't be mistaken for a bird or a plane — he flies like a turkey. Luckily Batman is 100 per cent hero, even if the computer incarnation does base itself on the tongue-in-cheek TV version. So pull on your underwear over your grey tights, slide down the Batpole and into the Batcave!

IT WAS in the 1930s that The Batman was born, immediate successor to Superman in the race to create characters for the new comic books. Under the guiding pencil of Bob Kane he soon became a favourite for *Detective Comics* and, in the early forties, Hollywood made two serials in which the caped crusader and Robin launched into World War II action.

By the fifties the comic seemd to have lost its way, losing its early menace; but the sixties pop generation took all things camp to its flower-power heart and Batman enjoyed a new lease of life on television. This was the era of gadgetry and Biff ! Pow ! fights. A leaner, more subdued Batman came from that brush with psychedelia, once more a figure of shadows and the night, brooding over social concerns. Over fifty years on, Batman has proved himself one of the perennial figures of popular literature.





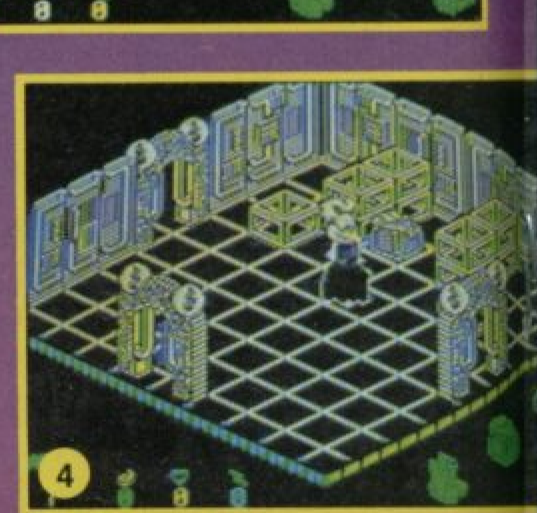
1 *Holy Batpoles — no Robin! Two routes to my next destination*



2 *So I chose the hard one! That ledge means there's no going back. Guess I'll just have to dodge these two*



3 *Whatever he is — he's not friendly. But I can block by moving the elephant's feet*



4 *This is where I get the sack — if only I can get past the killer koala!*

As Batman descends you'll notice that he's looking rather portly — obviously too many business lunches with Commissioner Gordon — but he's beautifully animated. As he drops, his cape swirls up and, if you leave him standing too long, he puts his hands on his hips and taps his foot impatiently. The other thing you'll notice is that this is yet another Ultimate look-alike but believe me, it's a good one.

The plot concerns boy wonder Robin, who's committed the boyish blunder of being kidnapped just as he was servicing the Batcraft. First task for our hero is, therefore, to find the disassembled pieces of the wonder vehicle which are scattered around the new look, enlarged Batcave.

Naturally, much of the early stages of the game are concerned with gathering all of those everyday luxuries that make a Batman's life bearable. These include the Batbag, without which items cannot be moved other than by pushing them. Even then they can't be moved from their starting location, and the problems faced in the Batcave are of the type where you have to solve one location before proceeding to the next. So what use is the Batbag? Stay tuned to this same Bat-review and we'll tell you.

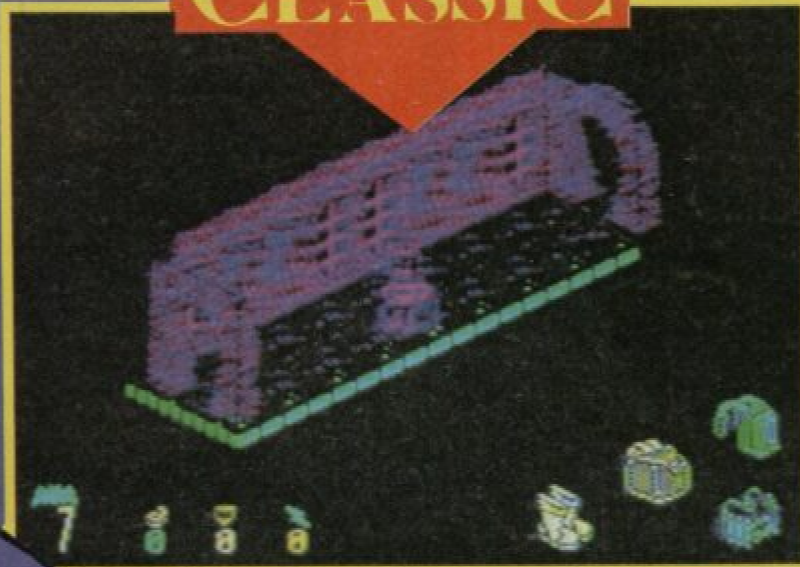
Your next useful object is a pair of Jet Batboots. Until he has his high power footwear, Batman won't be able to jump. This means that some doors, situated on ledges, are effectively one way until you can leap back through them. If the sill is still too high you can use your carrying ability to place objects in front of it and climb onto those first.

Remember, kids — Batman can't fly! That's the warning which went out to all of us impressionable youngsters with the TV show, and you'd better take note because there are lots of nasty tricks here that will drop our hero onto deadly spikes or the like. To overcome them you'll need the Bat-thruster — Holy Bat-thruster! — and, of course, the Low Gravity Batbelt, which might also help control Batman's spreading girth. The former lets you steer yourself while falling; the latter slows your rate of descent.

An added arcade appeal can be found in the search for energisers. The Batcave is full of these, and Batman must pick them up to ensure a long and fruitful life. There are a wide variety ranging from extra life, which is self explanatory, to energy which gives extra speed. Some shield our hero making him temporarily invulnerable, while others are useful for those 'with one bound he was free' situations — they let him make double-sized Bat-leaps.

All of these, like the objects, are logically placed, so you can be sure that if you find an energiser you'll be grateful in the long run. But beware, they all look the same — like little



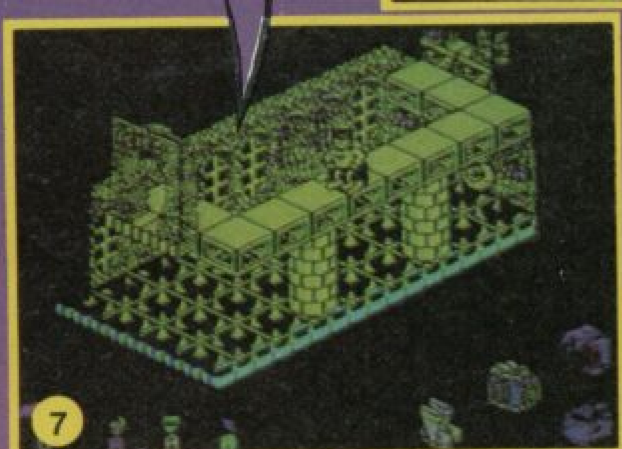


It's up to you now to guide me through the Bat-cave. Think you're up to it? If not — Robin's sung his swan song!

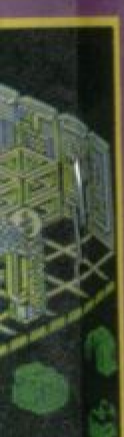
BATMAN™



8 A nasty moment there. The floor by the door is slippery. Had to run this way the minute I dropped through to stop myself going over the edge

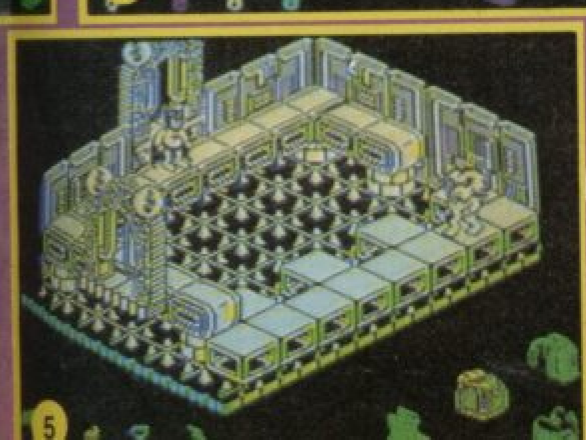


7 Just as I thought — the cursed canines. Have to follow them round without banging into the deadly walls





6 Suddenly! The conveyor belt is carrying me along and I want to reach the Bat-boots in the far corner, only there's a patrolling monster and those platforms ain't all they seem



5 Uh-oh! Now these are fast and smart and they don't want me to reach that Batstone

Batmen. There are also neutralising energisers which immediately cancel out any benefits remaining from other objects.

You start the game with eight lives, but one invaluable and, as far as I know, unique feature of the game is the Batstones. Passing them seems to have little effect until you lose all your lives. Then, when you restart the game you'll be given the option of carrying on at exactly the point, with exactly the same status, as when you collected the stone.

Better still, this effect nests, so that if you have collected two stones your first return will be to the later starting point, but if you can't continue you'll still be able to restart at the earlier point. It's a neat alternative to a Save feature.

Quite how the Batcave got so busy I don't know, but it's alive with the sound of nasties. They're an odd looking bunch but one thing's certain — they're deadly. Bumping into them makes Batman vanish in a puff. Some are relatively stupid, following a set course, but others home in on you and move fast so you have to outwit them. A good technique seems to be moving away from them, then dashing for the exit between them as they make for your previous position.

Be careful though, because several doors drop you onto slippery slopes or conveyor belts which call for immediate action. This one will keep the mappers happy for ages, though the fact that objects appear in a set order means that apart from some routes being safer than others, there is a single, ultimate solution.

Still, once you've solved it all — and that's no easy task — you can always try again at a higher skill level.

SOFT 5 WARE

What the programmers have so cleverly done is to provide two types of control sensitivity. On the easier one alignment mistakes are catered for and Batman will swerve to run through doors. Try the other and you'll need to be much more accurate in steering him.

The other initial options are the inevitable joystick choice, key definition which is extremely comprehensive, and sound which ranges from a wickedly loud rendition of the Batman theme and footsteps, to a silent version with nary a Biff nor a Pow, for late night play.

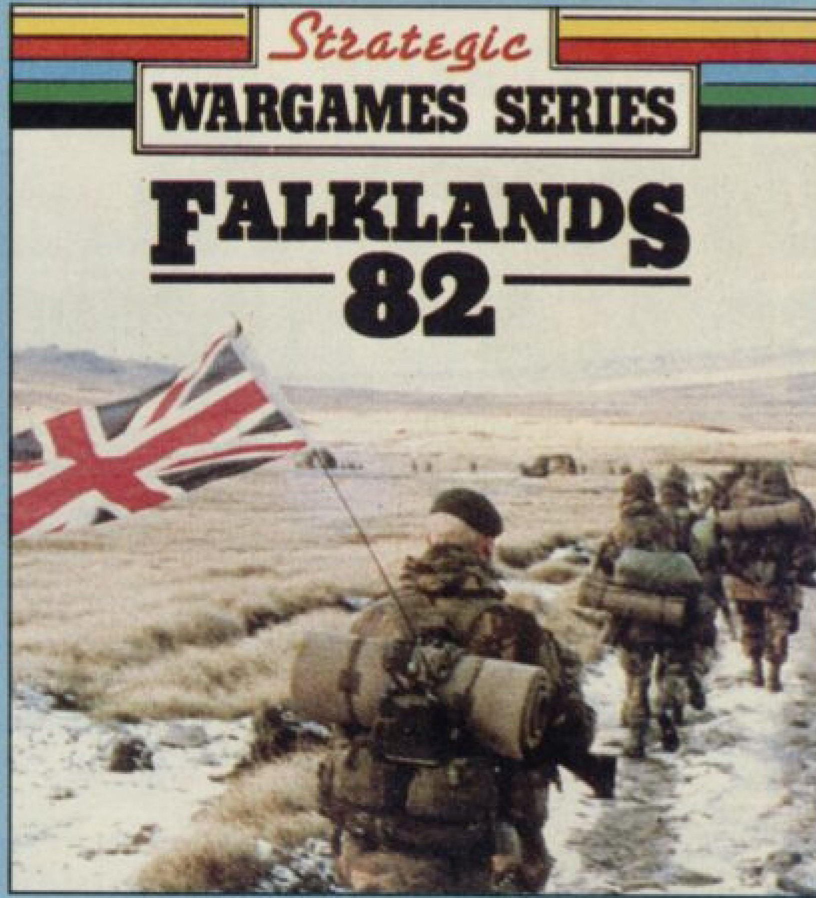
I can see this being one that will be played into the night too. It's extremely addictive and nicely atmospheric with some clever puzzles, and each challenge conquered leads to another original problem. Reaching the Bat-thruster is particularly tricky as it lies on the far side of an apparently impassible floor. Once you've solved it though you'll kick youself for not seeing the answer before, it's so logical.

Yes, you'll definitely want to play this one again and again — because leaving it unsolved will drive you batty.

Jerry Muir

Publisher Ocean
Programmers John Ritman, Bernie Drummond
Price £9.95 **Memory** 48K
Joystick Kempston, Fuller, cursor/interface II
★★★★★

Falklands 82



YOMP. Yomp yomp yomp. Don't cry for me, sergeant major, this time it's only a game. **Falklands 82** is PSS' contribution to Anglo-Argentinian relations. You, needless to say, play the British in your attempt to recapture the Falkland Islands and make the world a safer place.

The PSS game is really quite competent, if not in the same league as **Desert Rats**. You control the British Land forces for the final part of the war, the 25 odd days from the landing at San Carlos to the capture of Port Stanley.

The screen shows a map of the north-eastern Falklands. The whole map occupies about half of the screen, and units are represented by single character squares showing a foot-soldier, tank or field gun depending on type. Terrain is the usual simple graphics for mountains, settlements — why aren't Falklanders allowed to have towns? — and rough country.

Argentinian units remain hidden until you walk into them or they choose to reveal their positions by moving or attacking you.

The rules are very simple, and the ridiculously overblown explanation in the 18 page rulebook is off-putting and mainly redundant. Basically, each unit has an attack factor, a defence factor, a movement rate and range. The first is also the unit's strength, the second is modified by terrain, as is the third, and the fourth is how far the unit can attack. Artillery gets six squares, tanks and the like two, while infantry has to be next to a unit to attack it.

You can also call in air strikes and gunfire from offshore ships as and when weather permits. You allocate a number of ships to these duties at the beginning, and if the main fleet is badly attacked by the Argentinian air force, then the Harriers will not be available for land duties. The weather tends to get increasingly bad as the game goes on, so strafe everything you can early on. These facilities are triggered by the Attack command, so even if a unit is out of range it can still call in an air strike or barrage as long as it does not move.

Only one unit is allowed on a square at a time, so bottlenecks can easily occur. Since you can't move and attack at the same time you will tend to take initial casualties when advancing on Argentinian positions — it's wise to soften them up first with shelling.

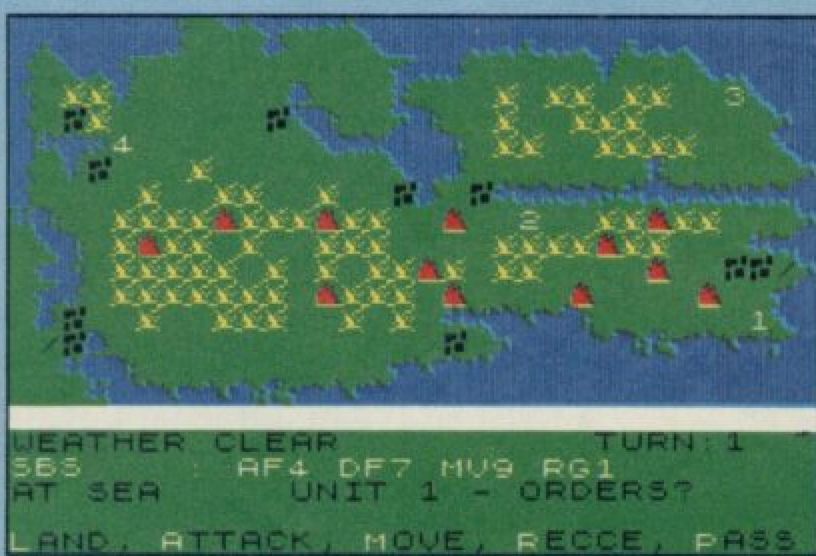
The objective is not to destroy all the Argentinian units but to re-occupy all the settlements. If you waste time attacking irrelevant Argentinians, you will run out of time — the game must be over between 25 and 30 moves, depending on the difficulty factor.

By wargame standards, **Falklands 82** is reasonably swift. It's very easy to play, and has some nice touches such as using the SAS and SBS to reconnoitre potential landing sites at the beginning of the game. What I find difficult to swallow is the idea that I might lose. The Falklands War was one of the most one-sided affairs imaginable and the outcome was hardly in doubt.

You can elect to play at masochist level — the PSS description — which gives a good tough game but the strength of the Argentinian units seems way out of proportion with reality. At the lower levels, though, it's easy to beat the Argentinians as long as you remember to go for the settlements and not for the enemy units, except when they threaten you.

That said, **Falklands 82** is a good wargame for beginners, and hard to beat at the top level. Presentation is not excellent, but clear and adequate for the scale of the game. It's certainly a lot better than the Midway game I last reviewed from PSS.

It's a pity, though, that you can't play on the Argentinian side. Maybe PSS thought it might be a bit tasteless, but by those standards all wargames are in dubious taste anyway. I should rather have liked to have a go, myself. . . *Chris Bourne*



Above is the initial map with four possible landing sites marked. Below is the situation after four moves. The British have made a slow start after landing at San Carlos water. The Special Boat Squadron is about to call a Harrier attack on an Argentinian unit.



Publisher PSS
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★★★★

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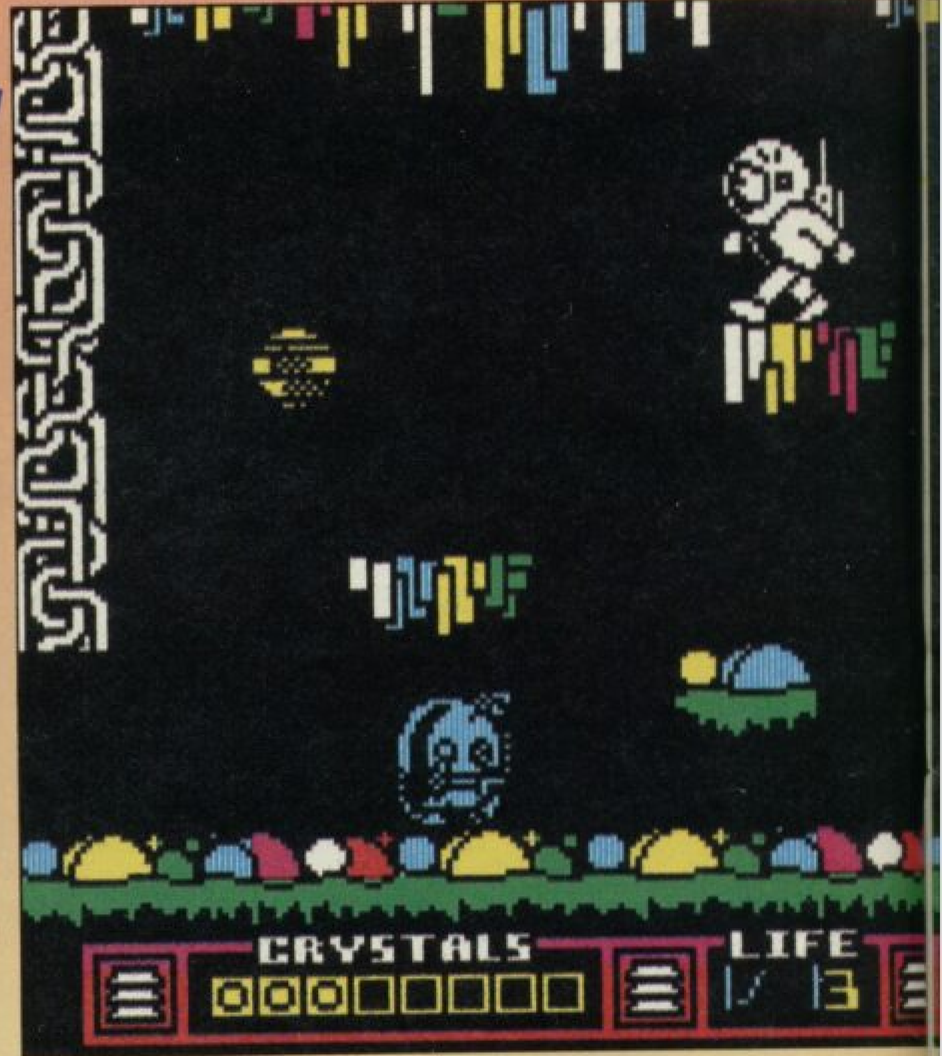




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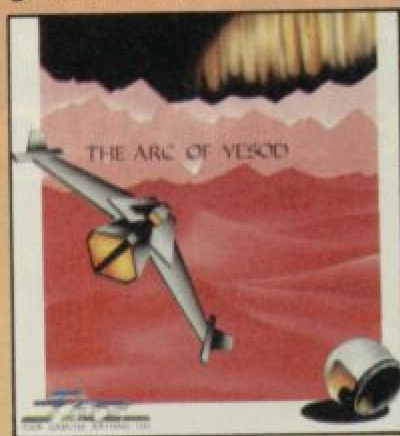
Arc of Yesod



ANOTHER tired cry of 'Save the Earth!' and Charlemagne 'Charlie' Fotheringham-Grunes leaps into a spaceship for the fourth time to destroy the elusive monolith — an alien eavesdropping device.

The **Arc of Yesod**, sequel to **Nodes of Yesod** — *Sinclair User*, August 85 — takes Charlie's adventures one step further. Having failed to get rid of the giant stone slab in Nodes, Charlie is given another chance and this time finds himself on the planet Ariat.

Both Nodes and Arc are very similar in storyline and gameplay, and other than the addition of speech and sound the 128K versions of both are practically identical to the 48K originals. And now for the game. Drop down manholes into a maze of subterranean caves and chasms to search for alchiems — the keys to a successful mission. With luck those will neutralise the monolith, providing you can get to it in time.



While searching the caves take care not to bump into any aliens — you'll lose energy at an alarming rate if you do. The patrolling nasties have several characteristics: floaters tend to make you lose energy but disappear on contact, chickens and mechanical objects patrolling the levels send you tumbling out of control when touched, and red creatures reverse your controls — rather like the purple flower in **Sabre Wulf**.

Each section of the maze is distinctive in its scenery, and each differs in size and the number of chasms and ledges to jump down and explore. If you find a teleport machine, leap into its beam and — on the 128 — you'll hear a muffled 'Beam me up' as you are launched into space and to another section of the maze. There you might find a new alchiem.

The cassette inlay is not much help when it comes to working out what to do. However, hidden in the menu screen is a smidgeon of information in a dreadful rhyme. If you wait long enough the scrolling line starts to roll.

'Charlies on the job once more, searching for a secret door . . . Collect the keys and he will be able, to keep the earth's future safe and stable,' and so on. What keys? I didn't see any, but perhaps it means the alchiems.

Like Nodes, your somersaulting spaceman has a little extra help. In your backpack is a sphere — like the mole in Nodes — which can be taken out and used to open hidden doors in walls and kill off any nasties. In addition, there is a smart bomb which eliminates nearly all the aliens on a screen.

It may be the fault of our

Nodes of Yesod



CHARLEMAGNE Fotheringham-Grunes is back again in a souped-up 128 version of **Nodes of Yesod**. Charlie gets sent to the moon to terminate the emission of signals from a large monolith of alien origin which . . . are you really reading all this?

What you get is a slick, fast **Underwurlde** lookalike with Charlie somersaulting gaily around lunar caverns, tracking down the eight alchiems which are the key to halting the monolithic transmissions.

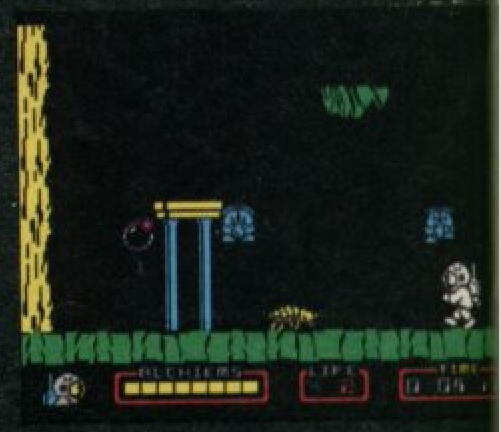
The graphics are clear and detailed, with a fine variety of monsters, some of which are deadlier than others. Nastier creatures include a mysterious red spaceman who eats your alchiems, and shimmering creatures which cause you to lose energy.

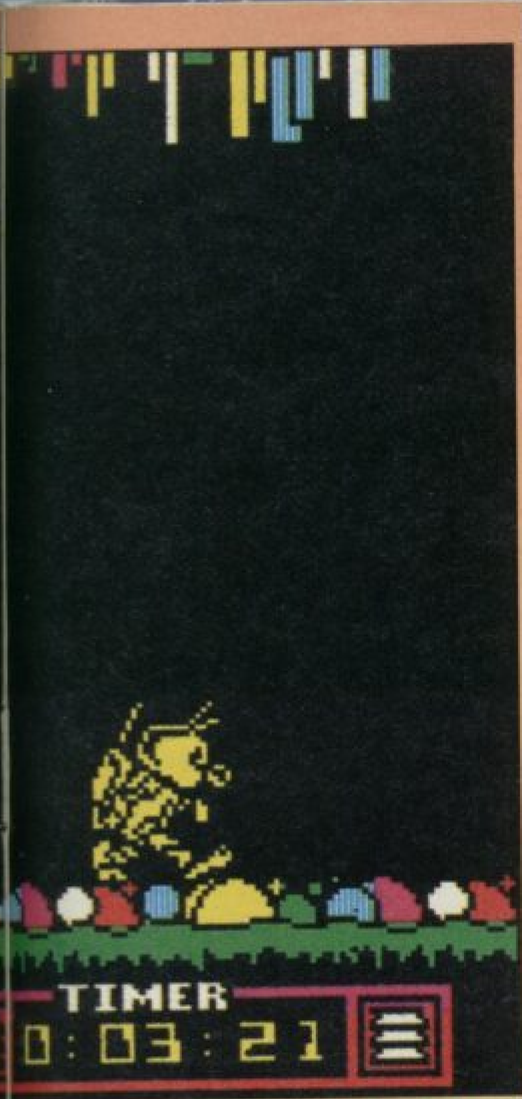
The sound effects are extremely good. The initial music is faintly reminiscent of an old *Watch with Mother* theme tune, but the music in the game is rather more atmospheric. Speech has also been attempted with varying results, but Charlie's cries for help are surprisingly audible, even if they sound like Kermit with a frog in his throat.

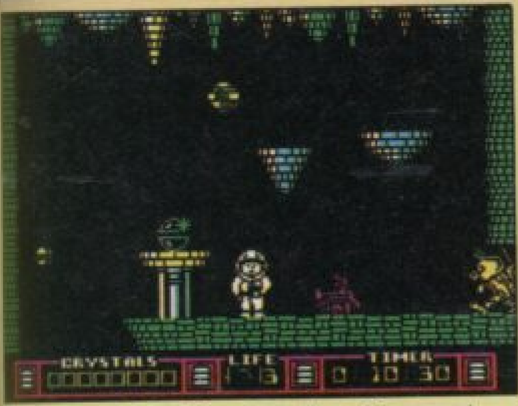
Nodes of Yesod should take you a long time to complete. It looks good, sounds good, and has enough quirks and surprises to keep your interest for quite a while.

An enjoyable game and no disgrace to the 128. However, other than the addition of music and speech, **Nodes of Yesod** remains the same as the 48K version. *Chris Bourne*

Publisher Odin
Programmers The Odin team
Price £9.95
Memory 128K
Joystick Kempston, Sinclair, cursor
★★★★







television, but the 128 speech sounded as if it were coming from the bottom of a deep pit. When Charlie falls a long way the TV comes up with an unintelligable splutter. If you listen hard you'll decipher 'ouch!' or 'that hurt'. However, the 128 music more than makes up for any limitations in the sound. It is very professional and the opening jingle has a definite disco beat which had me jigging in my seat for a minute or two (*not a pretty sight. Ed*). Thankfully, you can turn the sound down — an added bonus as it mutes Charlie and his pleas for help.

Graphics, sound and movement are excellent. You may think twice about getting it if you already have Nodes, but if it's a sequel you're after, then Arc does offer a new, if similar challenge.

Clare Edgeley

Publisher Thor
Programmers Thor
Price £8.95 **Memory** 128K and 48K
Joystick Kempston, Sinclair, cursor
★★★★

Robin of the Wood



THE NOTTINGHAM Liberation Movement — incorporating Friends of Sherwood — requires your help. Guerrilla leader Robin Hood has to recover the Saxons' arrows from the oppressive tyrant of Nottingham in order to galvanise his woodland pickets into winning the Saxon revolution.

Or, to put it another way, run round the maze, find the silver arrows, flowers, gold bags and whatnot, get into the castle, win the archery contest and bop off as many nasty Normans as you can, or it's boiling oil for you and a fate worse than death for the delectable Marian.

Odin's attempt to recreate Sherwood forest is a sprawling maze game of the **Sabre Wulf** variety. The graphics are pretty and rather fuzzy round the edges, picturing trees and undergrowth, bushes, and the occasional mysterious gate or crumbling wall close to the Sheriff of Nottingham's castle.

The forest is peopled by a number of characters. The ever present Norman patrols will shoot if they see you, but creep up behind them and they'll fall down like ninepins if you crack them over their silly helmets with ye olde quarterstaffe.

Then there are the rats. At least, I say they are rats. The estimable and learned John Stanley Gilbert claims these red creatures are in fact wild boars. It doesn't alter the fact that they look like rats. They have a nasty bite, anyway, and you can't kill them with ye olde knobbly stick, so avoid them.

Witches are a menace. They materialise in the shape of a willowy vision of human loveliness, to which Robin promptly responds with a dynamic groan as of one kicked in the groin. If you are carrying flowers they will take them; if you have no flowers they'll take your money instead, which is a pity as you need the money to give to the poor.

Actually, you don't give it to the poor at all. Instead, you give it to the old Ent who seems to have strayed a long way from Tolkien. He will distribute it to the poor on your behalf and provide you with a special charmed arrow in return for three bags of gold. You need three arrows to enter the Sheriff's archery contest. This is what the Ent says, but I reckon he's keeping all the dough himself and saving up to buy a part in **Lord of the Rings** game two.

He also has your bow and sword, weapons which make fighting the Normans easier. In fact he's a regular businessent, and much of the time is spent going to and fro between him and the loot in order to get equipped.



SOFT 4 WARE



Sound on the 48K version is as pathetic as you might expect, whereas the 128K game comes complete with sub-Clannad music and speech effects such as "Give me a chance", when Robin is about to lose another life. The fact that I can decipher Robin's comments is a compliment to Odin's ability with 128K sound effects.

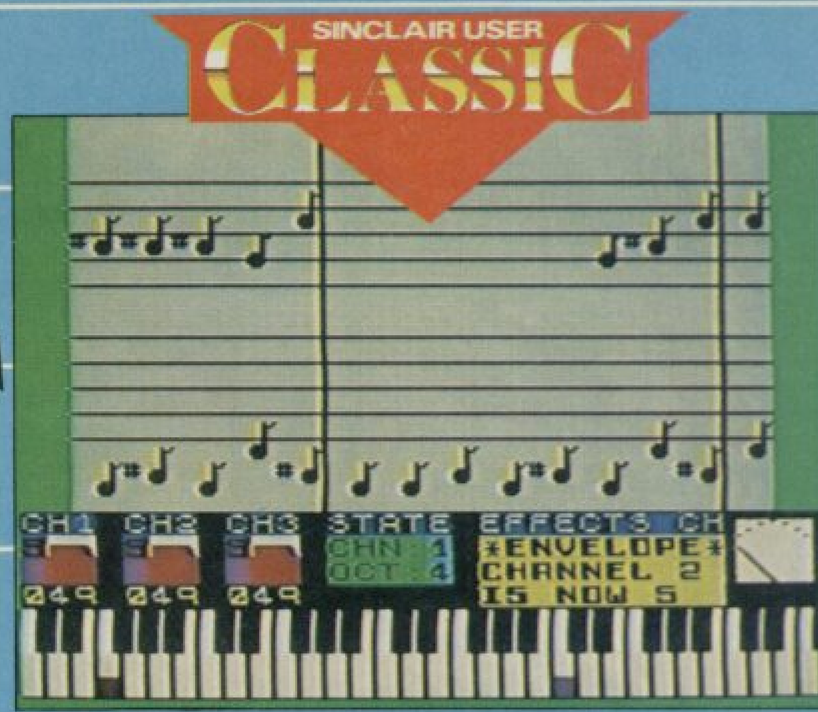
I didn't get as far as the tournament — it's a big game and a lot of time spent on mapping would be a decided asset. I was impressed though, by the way the Sheriff arrested me and flung me in prison just as I was about to pull the plug in boredom. Robin then gets to run around a maze in the castle for a bit looking for the key and the way out.

A hermit will give you extra lives if you can find him, and no doubt there are a few extra bits hidden here and there along the way. If you are new to Sinclair computers you could do worse than buy **Robin of the Wood**. It has good graphics and a complicated and absorbing theme, but is not too difficult to play. Older hands will probably find it a little simple and rather too like **Sabre Wulf** and similar maze games of over a year ago.

I think it's all pretty silly myself, but I'm prepared to give both 48K and 128K versions the benefit of the doubt and a four star rating all the same. Certainly there's plenty of fun to be got out of it. *Chris Bourne*

Publisher Odin
Programmers Odin
Price £9.95 **Memory** 128K
Joystick Kempston, Sinclair, cursor
★★★★

128 Music Box



BEBOPALULA that's my Spectrum . . .

Everyone knows the Spectrum 128 has a great little sound chip inside, but apart from what is explained in the booklet — I refuse to call 14 pages a manual — there is no information around yet on how to use it.

In particular, those who have difficulty recognising tunes by the letters of the notes will find writing music in 128 Basic frustrating, logical though the system is. Melbourne House has come to the rescue with **128 Music Box**, a substantial upgrade on **Wham! The Music Box** which was released a few months ago for the 48K machine.



That was a superb piece of programming in its own right, but the added benefits of the new sound chip make the 128 version an extremely powerful tool for composing music.

The EDIT mode is where all the action happens. You are presented with a screen showing a stave of music which scrolls across as you write, and a keyboard below which indicates the note you are playing. You can work over four octaves and extend that range further if you desire. Each channel is written independently of the other two, and you can set different qualities of tone for each, and also use loops to repeat a particular channel.

Unfortunately, you are compelled to use the same single basic unit for each note, with no variation in duration. That is annoying if you are able to read music, because tunes look rather different in this simplified notation, but it does mean non-musicians do not have to worry about crochets, quavers and so on. If you want a long note, you simply put two or more notes side by side. Unless you are using a sound envelope, which makes those notes sound staccato and disjointed, they will all be run together.

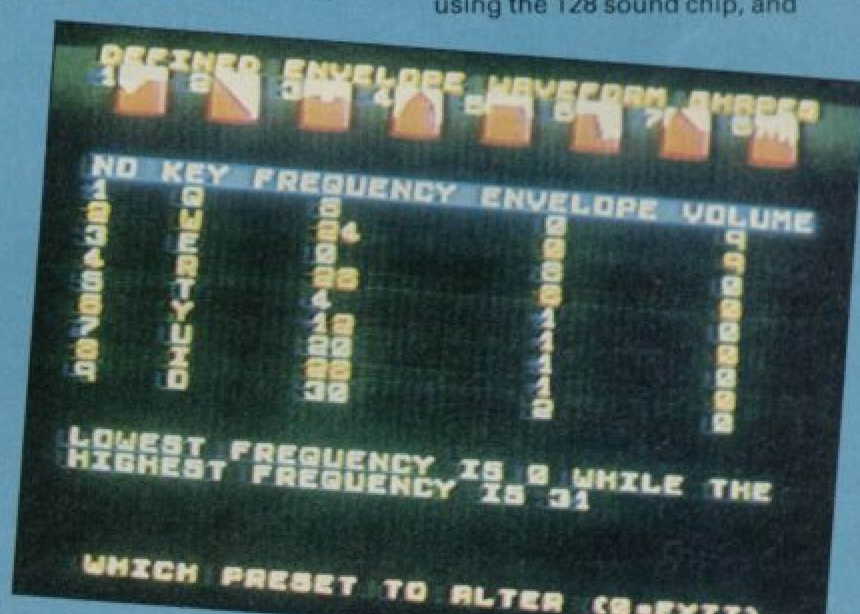
Sound envelopes define the way a sound builds or dies away. A piano, for example, will normally have a sound envelope which decays towards the end of a note as the note fades slightly. An organ, on the other hand, stays loud throughout the note, while reed instruments, such as saxophones or mouth organs, would have a spiky type of envelope which is the result of the reed's vibrations.

Those can all be programmed into **128 Music Box** which contains eight definable envelopes. One of those is used for white noise sound effects — explosions, hisses and some types of drum beat come into that category — but the other seven can be altered to your taste and used in any combination on each of the three channels. For example, you could define seven saxophone-type sounds and use them to make subtle changes in the 'performance' of your music.

Noise effects are a combination of frequency and envelope — you can set up nine of those and bring them in to your tune at will, though they will take up one of the channels. Startling variations of sound effect are possible and experimentation is the best way to decide what you want.

The program also includes the facility to save your tunes on tape, microdrive or RAM disc. I was particularly pleased to see the last, and hope software writers take advantage of the RAM disc for saving game positions as well. You can also compile the tune into a compact piece of machine code which contains the routines for playing the tune. The music can then be inserted into a program independently of the Music Box software, although it cannot be easily edited in that form.

The ease of use is remarkable, and the results extremely impressive: "That sounds professional," remarked Clare Edgeley on hearing my first efforts. In fact, it's been hard to drag myself away from our office 128 long enough to write this review. In the absence of a proper book on using the 128 sound chip, and for those who doubt if they would understand such a book anyway, **128 Music Box** is the essential program to buy.



The envelope facility allows you to tailor sounds to your own taste



Anyone who has forked out for a 128K and does not buy this program is missing out on one of the most entertaining aspects of computing, and one which is set to take off this year in a big, big way. Well done Melbourne House — the first 128K *Sinclair User* Classic. *Chris Bourne*

Publisher Melbourne House
Price £9.95
Memory 128K
★★★★★

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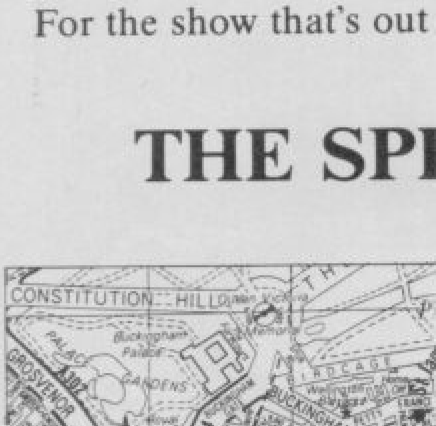
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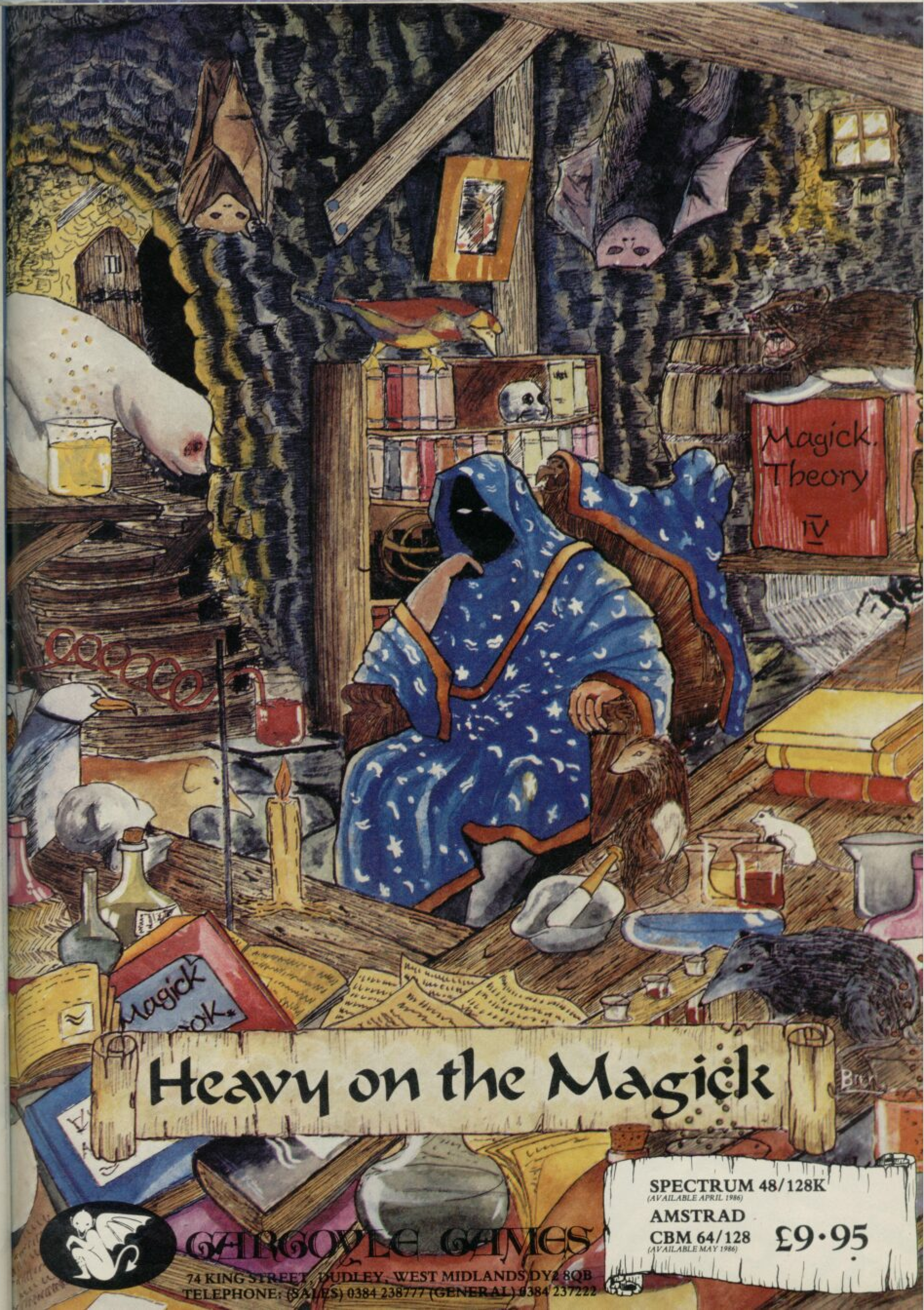
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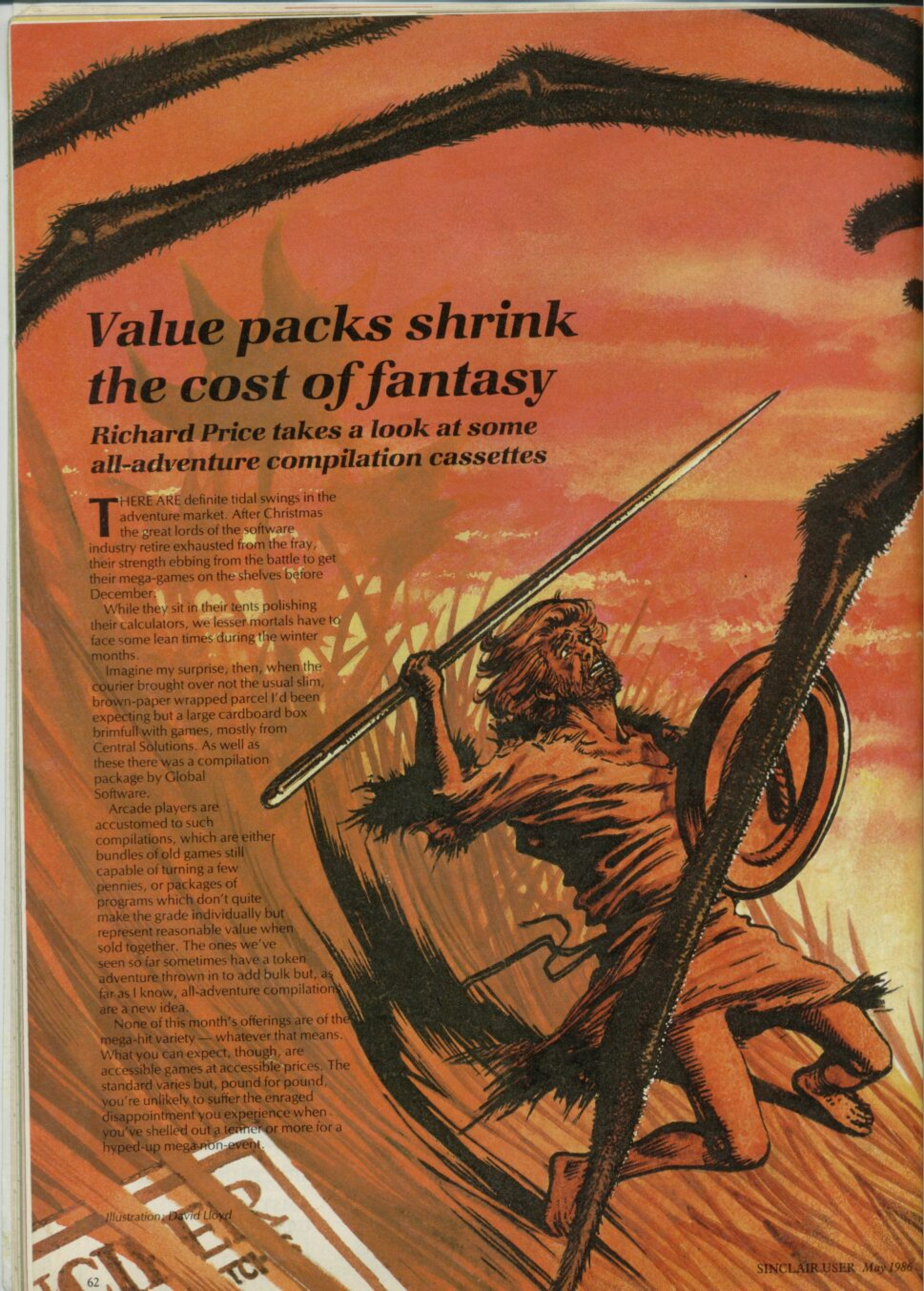
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Value packs shrink the cost of fantasy

Richard Price takes a look at some all-adventure compilation cassettes

THERE ARE definite tidal swings in the adventure market. After Christmas the great lords of the software industry retire exhausted from the fray, their strength ebbing from the battle to get their mega-games on the shelves before December.

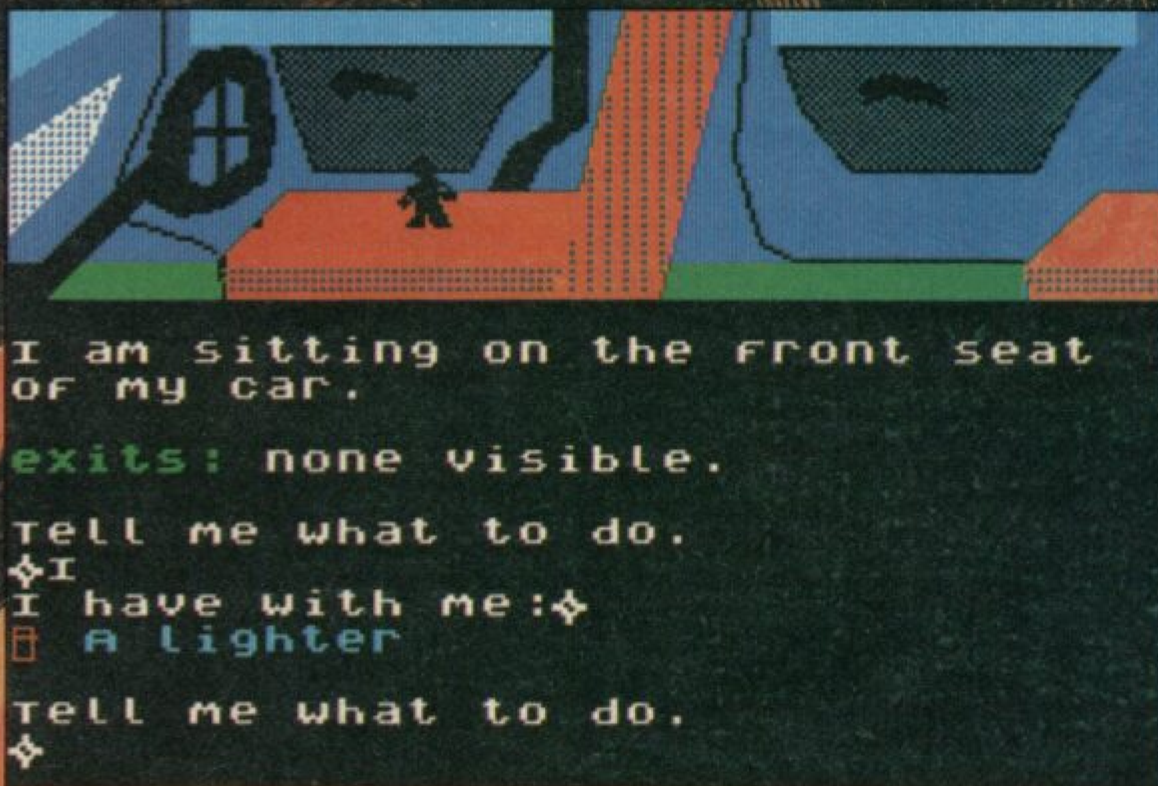
While they sit in their tents polishing their calculators, we lesser mortals have to face some lean times during the winter months.

Imagine my surprise, then, when the courier brought over not the usual slim, brown-paper wrapped parcel I'd been expecting but a large cardboard box brimfull with games, mostly from Central Solutions. As well as these there was a compilation package by Global Software.

Arcade players are accustomed to such compilations, which are either bundles of old games still capable of turning a few pennies, or packages of programs which don't quite make the grade individually but represent reasonable value when sold together. The ones we've seen so far sometimes have a token adventure thrown in to add bulk but, as far as I know, all-adventure compilations are a new idea.

None of this month's offerings are of the mega-hit variety — whatever that means. What you can expect, though, are accessible games at accessible prices. The standard varies but, pound for pound, you're unlikely to suffer the enraged disappointment you experience when you've shelled out a tenner or more for a hyped-up mega-non-event.

Illustration: David Lloyd



Fourmost Adventures

THIS PACKAGE from Global Software features three Quilled text adventures and a re-release of Mizar's **Out of the Shadows** — a complicated *Dungeons and Dragons* simulation.

Microman

THE best of the Quilled games is **Microman,** a souped-up revamp of **Project X — The Microman** written by John Lemmon and Tim Kemp in 1984. That was before the **Illustrator** and **Patch** utilities were available, and they've now been used to good effect to add half-screen faster graphics which don't interfere with the rest of the game.

We've reviewed the adventure before and, standing alone, it rated four stars. The plot will be familiar to any fan of the *Incredible Shrinking Man*, and stars Professor Neil Richards as the scientist who accidentally irradiates himself whilst running an experiment on miniaturisation.

Knowing he has little time before the rays take effect, he leaps into his motor and speeds off to his colleague's nearby lab for help. Alas, before he can get to the antidote he blacks out. Waking, he finds himself shrunk to the size of Action Man and stuck in his car.

A little lateral thinking about the uses of seat belts will soon see you out of the car, but if you want to get back to normal size you're going to have to run the gauntlet not only of Com 2, your friend's sophisticated security system, but also of the ravenous flora and fauna in the grounds around the house.

Everyday objects take on unexpected significance and weapons can be fashioned from a needle and button. These are soon necessary in a fight to the death against a giant mole.

You'll need to work out how to cut your way through the glass of the greenhouse, and find an air supply to take you into the depths of the fishpond. The problems then become more scientific as you attempt to overcome Com 2 and its protection devices. Beyond lies safety and normality — perhaps.

The intriguingly original storyline and intricate problems generate an absorbing atmosphere. There's little that's superfluous to the action and, despite the addition of the bright graphics, the game remains large — the original text-only game had 150 locations and there are still more than 120 in this version.

Microman is yet another example of the **Quill's** versatility. It sold for £3.95, 18 months ago, and its inclusion in a package retailing at £7.95 for four games makes for excellent value and satisfaction.

Out of the Shadows

THIS isn't a standard adventure. It's a real-time implementation of the D&D format, offering a choice of quests, regular and difficult combat sequences and plenty of spells and treasure. There are the usual hit point ratings and you can develop your character by gaining experience and wealth.

Once you've loaded up you must choose your race — elf, dwarf or human, each with different characteristics — and then decide whether you want to play through one of the six prepared quests or create your own. The screen displays a map of the visible area around you as well as a scrolling commentary of your actions.

There is a large command vocabulary which will allow you to move, fight, trade and perform magic. Because of the speed of the game and the viciousness of your opponents, it is wise to be familiar with those commands before you start — any dithering will end in death.

There's a large element of surprise in the monsters' attacks. Because your screen map only shows what you could actually see in 'real' life you never know what may be lurking around the corner.

You also start at a low skill level, either unarmed or perhaps with an ineffectual dagger. Fortunately, there is a merchant who can sell you survival equipment — in fact he is the only definitely friendly character in the game, so you're going to need his help and a fair amount of treasure to acquire the items you'll need.

You begin in the safety of your home base and the first task is to find the merchant. Step outside and you're immediately into hostile territory. Monsters, animals and traps abound and even the journey across to the merchant's house can get you severely damaged. Treasure is secreted in containers

►65



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63 ◄ scattered around the countryside and in other buildings, but is almost invariably guarded. If you have weapons make sure you've 'prepared' them for use.

The quests are fairly typical of the genre — find Elessar in the Labyrinth, steal the Orb from the Rusters, deprive the Demons of the Sceptre. To start with it may be wise to choose a questless option — that will help you to get accustomed to the game format and to learn exactly what is treasure and what is dangerous. Once you've done that you may feel more confident about taking on a quest or two. Simple they're not!

The magic is limited. You can cast sleep, slow and blast spells, teleport up and down or apply healing ointments to your inevitably numerous wounds. There are also magic rings, wands and staves to smite with and the occasional potion to restore your vitality. A full inventory can give you a rundown on your possessions, armour, wealth and spells.



Out of the Shadows

All told this is a fast, action-packed and complex game with a variety of scenarios. The interpreter has a good response time and, though the map graphics are a little spindly and occasionally difficult to understand, especially on a small screen, they are adequate for the gameplay. Fighting your way **Out of the Shadows** will be demanding, so gird your loins, ye D&D freaks.

Galaxias

Written by Fergus McNeil of **Bored of the Rings** fame, **Galaxias** is no relative of the arcade **Galaxians**, save for the fact that it's set in space. Cast as a space pirate in command of a fancy spacecruiser, you must discover a fabled crystal — further detail is not given and you'll have to piece information together as you explore. The game has a number of location graphics, mainly to set the scene at landing points.

The action commences at Zagro Spaceport. Exploration reveals the usual down-at-heel bars and dirty landing bays. Except for food and drink there is little to find here beyond a laser probe which you can expect to come in handy later on. Having exhausted the dubious pleasures of Zagro you climb into your cruiser.

On board there's the bridge with its command computer and also engine-room, walkways and living quarters. As befits a fierce space pirate, there's a smuggler's cache down in the engine-room, kitted out with a handy bar of gold. The teleport will beam you down to the planets and there's also an escape ship, its presence ominously suggesting that you're likely to run into trouble somewhere in deep space.

Navigation is simple. Type 'list' into your command computer and the planets within range will be listed. Type in the name of the planet or space station and you'll be transported there with the minimum of fuss.

On each planet you'll face particular problems, most of which will require equipment from other worlds to get you through. So, if you want to get the laser rifle embedded in a wall on the ice-age world of Akrol, you'll need to search Space Station One carefully — a thermal lance is hidden and only this will melt the cave's ice wall.

As you wander this freezing world, a little like Crawley in the depths of December, you'll come across a grumpy alien called Jekra. He says he wants some covalium. You may think this to be some sort of tranquilliser to take his mind off being in a place like Akrol, but it seems to be a mineral of some kind. Could it be found in the mines on the hi-tech planet you've just been to? Beam up and zoom back to Septule to have another go at getting into the mine.

There's a good Trekkie feel to the game with the various pieces of sci-fi machinery helping to build up the atmosphere. I could have done with a bit more creature interaction but this is always hard to achieve with the **Quill** system. At first you feel a bit lost in the usually empty cities and ports you visit, but you'll start to get more hooked once you've made a few connections and got used to the flying around.

Galaxias is a fairly serious adventure, written before Bored, so don't expect any loony humour. And don't press the red button in the defence bunker on Terminan — you'll end up as a space age Robinson Crusoe without Friday.

The Mural

Finally there's **The Mural**, which certainly does have a loony element tied in with an excellently off-colour plot. As you stroll along the high street, minding your own business, you're hurled into a cave on another world by two creatures clad in suspender belts. As if this wasn't enough you discover that your quest is to paint over a naughty mural. Suffice it to say that it involves 11 nubile maids and a gorilla in a tutu.

Yes, this is a zany one, fellow travellers, set in a bizarre little land where, on entering a cottage you'll be told, 'there is . . a well worn but comfortable arm-chair and a copy of the New Orc Times on a table. Also a C5 order form smoulders in the grate and there is a Lithuanian horror movie (with subtitles) on the TV. You can also see a carved wooden cuckoo."

Such scenes are commonplace in the world of **The Mural** and I must confess to falling about when, after examining a bucket stuck down a well, beeps came forth to the tune of, "There's a hole in my bucket, dear Lisa." After the tune has finished, the simple message, "Good, huh?" appears on screen.

It's a pleasantly daft, rude and appealing game which is bound to tempt addicts of games like Bored. It's not by McNeil but by Nic Ford. I shall be ever in his debt if he tells me just how I can snuff the giant sandwich-eating penguin which stops me escaping from the cave with the mothballs in it. Good fun.

Richard Price

Fourmost Adventures
Publisher Global Software
Price £7.95
Memory 48K
★★★★★

Father of Darkness/ Murder

THE VAST BOX of games from Central Solutions held a number of adventures written on the **Quill**, some with graphics and some without.

You'll pay £1.99 for single graphic games but they're also available in twin packs at £2.99. Take care, because some of these adventures are back-to-back with arcade games, so check before you buy.

The plain text games were originally marketed under the Pocket Money Software label at 99p each, and it seems as if some of these have also been put back-to-back to create the Double Play adventure label. If you want further details it's probably best to drop Central Solutions a line. Central Solutions



operates from 500 Chesham House, 150 Regent Street, London W1R 5FA.

Out of this bumper bundle I chose one of the £2.99 double adventure packs, one graphic, one plain text. The dramatic cover of **Father of Darkness** portrays ►66

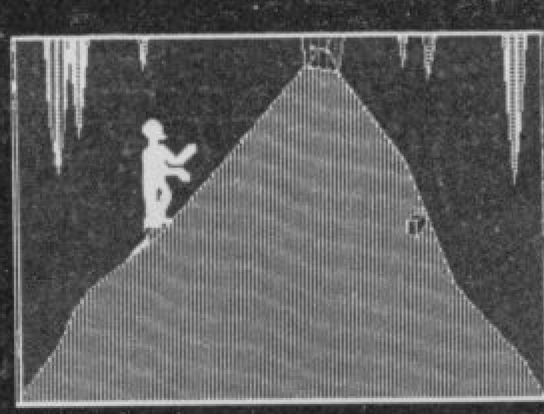
ADVENTURE

65◄ Adolf Hitler in characteristic strutting pose before his occult symbol of destruction, the swastika. The loading screen shows a lurid picture of graffiti daubed on a wall urging 'Death to Nazis'. From this I was expecting a sort of Quilled War Picture Library game full of machine guns and SS officers. Not at all the case in reality.

The background and storyline is actually more mystic than macho and you find yourself in the role of Art, a young lad undergoing training from his Druidic master at Glastonbury in the depths of the dark ages. Art of course is Arthur and his master, Merlin.

Merlin explains that the great sword of power, Excalibur, has been stolen by the Father of Darkness. This foul being has pulled the sword through time and now uses its magic to subjugate all the peoples of Europe beneath his heel.

Because of the theft of the sword, Art's land is withering and the other future world is dying. Merlin stresses the urgency for some hero to journey through time to recover the weapon and thus free the two worlds from the curse. He asks Art to accept and takes him into the night. There



Father of Darkness

he leaves him in a gloomy cave.

Asking for help here results in finding a bicycle lamp on the floor. Switch on and a door will be revealed which takes you out into a terrifying new world — "There is so much noise. I can see metallic monsters rushing up and down. I see the people streaming towards a temple. It is a dangerous and strange world."

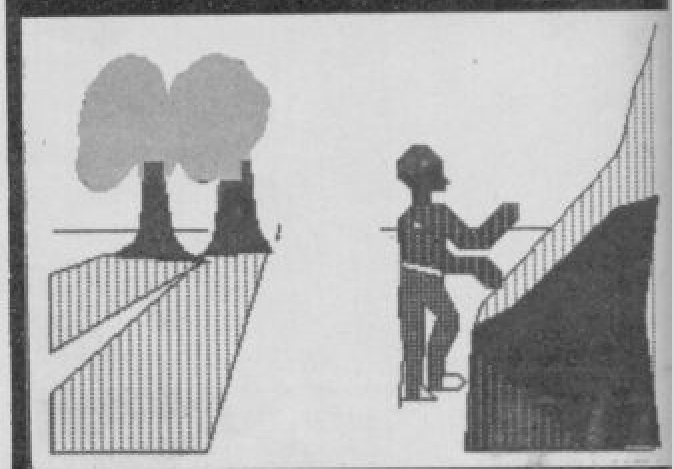
By following the people into the 'temple' you'll realise that you've really entered a cinema in wartime London. "All the people are sitting in an almost reverent manner watching a bright and flickering large window at the far end. In the window is a view of daylight showing great metal monsters standing on iron belts, with flashes and smoke pouring from tubes set in their tops."

This is only part of one of the longer descriptions which have a significant effect in scene-setting. Using Look will often provide more detail. Make sure you make good use of the Help facility — it not only offers advice but, on occasion, makes things happen. If you use it in the cinema someone will drop a box which you may well need later in the game. You'll have to examine it before you can pick it up.

You will encounter Merlin again within a short time. He will act as a spiritual guide through the two parts of the game and his advice should be heeded. He tends to disappear when things start getting rough but, once you've accomplished a task, he'll come back to take you through the next portion.

The graphics are drawn on the **Illustrator** without the **Patch** — most of these games are pre-**Patch**. As such they can be slow but there are a limited number of pictures which cuts down on the time-wasting. In general, the two parts of **Father of Darkness** are well-presented on screen, with an effective use of colour labelling, flash and so on.

In the first part you must find your way from London into occupied Europe and then, in the second, track down Hitler in his Eagle's Lair. It's an intelligent, well written game.



Father of Darkness

On the other side of the tape is **Murder**, a standard detective game set in a hotel. There's the usual Agatha Christie cast and you are equipped with four specific questions you can use to interrogate suspects. Only the murderer will lie to you, so your main aim is to catch someone out about their alibis or motives. It has a *Cluedo* feel to it but isn't bad as such games go — I confess to not being a great fan of detective stories of this type. If you're keener than I am you'll probably get something out of it.

Whatever the case, with one two-part program and another entirely different game on the other side, you're not doing badly for £2.99. **Father of Darkness** alone will cost only £1.99. The rating reflects those bargain prices. *Richard Price*

Father of Darkness/Murder
Publisher Central Solutions
Price £2.99
Memory 48K
★★★★

Adventure Game Pack

HOW WOULD you feel about paying 60p for an adventure? For the price of a few Mars bars you'd be unlikely to grumble too much even if it only gave you a few hours of brain-wringing.

Well, you can buy ten adventures for an equivalent cost per item. Central Solutions has put together ten Quilled text-only games in their **Adventure Game Pack — Volume 1**, all for the sum of £5.95. Although there's bound to be at least one turkey amongst them, there are likely to be several you enjoy.

The subjects are varied — war, fantasy, science fiction, time-voyaging, even *Alice in Wonderland* (though I have a suspicion that that is the gobbler!)

Crystal Quest is a **Star Trek** type game. You travel around the galaxy in search of six crystals which will save civilisation from destruction. There's a fair bit of fun in setting the coordinates, beaming down and getting disintegrated by androids. It has a decent number of locations.

Dragon Slayer is for fighting fantasists, being about the obvious. For many years the flying reptile has ravaged the land and the king has now decided to resign. Enough is enough, he thinks, and issues a challenge for some dumb hero to come forward and dispose of the beast.

There are three conquests to be made — first there's the Dragon in its lair, then you must locate the Temple of Light and, finally, enter the Wizard's Castle. You'll find the expected pseudo-medieval background packed with puzzles. All done on a good-looking screen with uncial lettering. It seems OK.

Sea of Zirun is an odd one in which you're sucked down into an alternative reality whilst out for a quiet swim. The whirlpool takes you into another ocean full of weird creatures, glowing caves and sea-nymphs. You spend the entire game trying to find a way out to your own time.

I didn't have time to play through every game but I feel that the pack is worth the price and contains a pleasing variety of plots. Almost all of these games will have been written by amateurs and prove that creativity in adventuring isn't something which only comes out of big software houses with big wallets.

And if anyone can tell me how to even start to solve **A Tangled Tale** — the Alice game — I will send the first correct respondent a crumpled fiver, if Gremlin will loan me one. *Richard Price*



Adventure Game Pack
Publisher Central Solutions
Price £5.95
Memory 48K
★★★★

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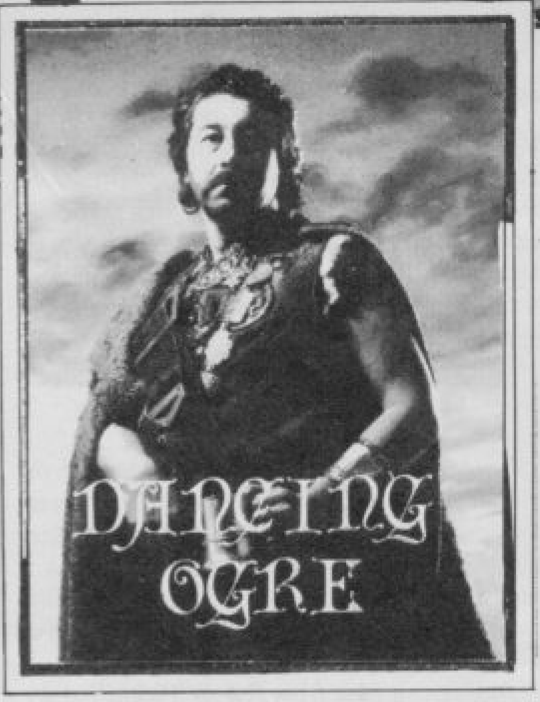
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RACKET



Adventure Helpline

Gordo Greatbelly, landlord of the Dancing Ogre, offers help to lost adventurers

AFTER SEEING movements in the desert's dawn light, I woke the others. Iubba I roused with a mighty thwack on the pate since he was supposed to have been standing watch. As usual he complained vociferously, but a second blow conveyed my point more clearly and we all stood to, weapons at the ready.

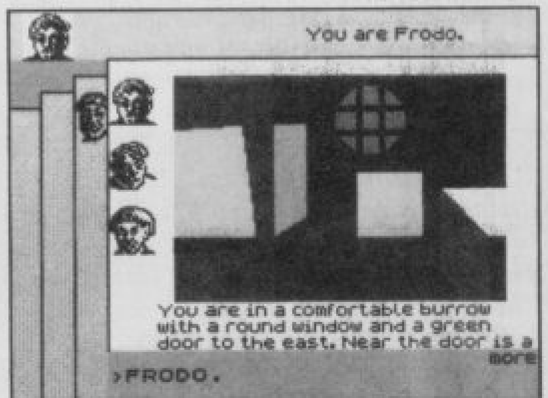
For a full hour we waited. The sun rose and its heat twisted the horizon into a shimmering uncertainty.

And so they came, five dark riders in black armour and sandy cloaks. Their hoods covered helms twisted from boiled leather, and their horses too wore bronze masks. "We are the Guardians of the Sands, O Fat One," said the leader, his voice low and harsh, his terminology mildly insulting. "You have a simple choice to make — you can either die now or . . ." he pushed his visor up, ". . . or if you prefer, you might like to buy some carpets, perhaps some jewellery for your wives?" He opened his cloak and drew forth a sheaf of papers. "I also have some very interesting pictures, very genuine, very cheap."

He leered and winked at Iubba who appeared most taken by this suggestion. I demurred but the rest of the riders growled more about cheapskate foreigners, the difficulty of turning an honest penny in the sands and, more to the point, drew their fearsome scimitars.

As we had not breakfasted, a fight was out of the question. So we all settled on the sand and the riders spread out a number of mangy carpets and tinny bracelets, as well as some carvings which would make a camel blush.

After being well-fleeced we were escorted till dusk to an overnight camp where other travellers rested from the exertion of haggling over their genuine desert carvings. Iubba, however, was content and wrapped himself in his cloak to inspect his interesting and genuine pictures. I do not know what I see in that man.



Lord of the Rings

As we talked and ate, Deejay Edwards of Formby told us of his journey in search of **The Lord of the Rings,** *and asked how he might enter the Mines of Moria, at the entrance of which there is only the outline of a door. Alleyn Conway, Defender of the Shire, told him simply to enter the password 'Friend' — remember that in the scrolls of this quest the runes read, "Speak friend and enter."*

Alleyn also suggested a way to destroy the Black Riders at Bree. "Go north into the bar and then send Sam and Pippin out to kill them." Can it be this simple? Alleyn continued, "To get safely along the highway after the bird has spoken with Strider, wait twice at the gate of Bree, go east. Now wait twice again, go east, north and twice east once more. Then wait five times."

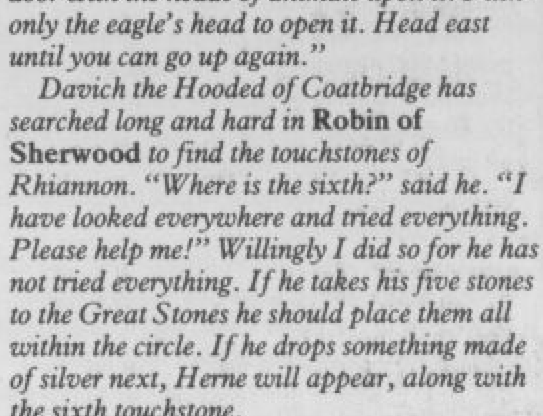
Marco Kelly of Bathgate continued the advice. "Crossing the ford to Rivendell is simple provided you ride the white stallion across. Once there, Bilbo will take you to his room and insist on having the Ring. Keep saying no and eventually he will give up and give you a sword and a fine coat of mithril mail.

Once you've entered Moria you should go up, east three times then down, west, south and down again. You should then come to a door with the heads of animals upon it. Push only the eagle's head to open it. Head east until you can go up again."

Davich the Hooded of Coatbridge has searched long and hard in **Robin of Sherwood** *to find the touchstones of Rhiannon. "Where is the sixth?" said he. "I have looked everywhere and tried everything. Please help me!" Willingly I did so for he has not tried everything. If he takes his five stones to the Great Stones he should place them all within the circle. If he drops something made of silver next, Herne will appear, along with the sixth touchstone.*

This emboldened the Lady Renvouge La

Robin of Sherwood



Rouge of Swanage to ask where the nun might be found. "I have money to pay but there is no nun to be seen." To make use of the nun you questers will need four hundred gold pieces. Take them to Kirklees Abbey and knock on the door. The nun will then appear. Give her the cash and she will drop the touchstones.

It seems the Lady had not yet been to Nottingham for she said she could not get a ride on the serf's cart. After finding Siward the Thief, go into the forest and stop the cart. Get in and the horses will bolt to the Sheriff's castle. Wait till night to leave the cart and steal some more treasure. That will solve the cash flow crisis and more into the bargain. This information, and much more, came from the resourceful Mark Thomas.

So I strolled across to the throng of travellers debating **Bored of the Rings.** *Of the questions I am asked upon the road, and in the letters I receive, almost two-thirds are about this mad quest. The Clerk of Kirkcudbright and fair Lucie O'Brien of Bishopthorpe had both been turned to cement by the dreaded Basilisk's gaze. Angler Fisher had a similar problem and tried desperately to find a route out of the marshes. When you encounter Goldbum give him the platinum brick and search through the marsh until you find the sunglasses. Wear these and head back to the Basilisk by going west twice, south, east, south and twice west*

Bored of the Rings



again. By thus protecting yourself, the Basilisk should become more concrete than you.

Rymill of Wirral and Le Molyneux of Oxton had both found the large box tied with magic string but could not open it. This is close to the end, so I must take care not to reveal too much! However, once you have come to the silent road you should go south twice, and then west to the headless statue. Now go west to the Bar. Enter it and leave immediately.

When you see the Kremlins come out, attack them and afterwards re-enter the Bar. The scissors should now be ready for you. At this point you should go to the shopping centre's electrical department and cut the string. The rest I leave to you. Do not linger in the Bar — the Kremlins will kill you.

This advice was of some assistance to Thorne of Mansfield, but he still remained bemused by the problem of the Red Line in the Red Room of **Red Moon** *which he could not cross. Nor, too, could he turn the acorn into a bridge to span the chasm. To make the bridge he need only drop the nut*

▶70



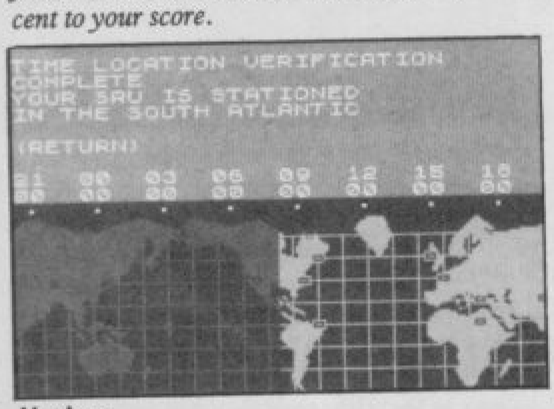
69◄

beside the chasm and see what happens.

As to the line, Amos Sharptongue of Tonbridge advised that he should simply rub it out. It can be erased without needing any equipment.

Amos' own problem ran thus. "I have crossed the line and have now entered a room with four exits. East of here I become blinded by bright lights and cannot continue. How can I combat this threat?" The lights can be extinguished by dropping the Black Ball which contains a spell for this very purpose.

"Thanks," says he, "and in return let me impart these facts so others can benefit. The underground water channels can be travelled by wearing the gas mask fitted with tube and flask. Kellf the thirsty one can be relieved if you first go to the hall of mirrors. There you should kill your reflection — which can be done if you use the Mushroom, Potion and Ring correctly. Now go south-east and fill the bottle from the fountain beyond the acorn bridge. If you give Kellf the bottle he will tell you about mummies, and will add five per cent to your score.



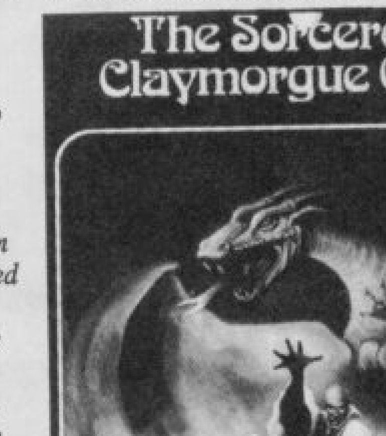
Hacker

Ivan the Terrible of Twickenham staggered past beneath the weight of several moth-eaten carpets. "I have beaten **Hacker,**" *he said. When he had explained that this was not an axeman's quest, he gave me a list of security checks. The first check code is MAGMA, LTD. Second is AXD-0310479 and the third HYDRAULIC. The final check code is AUSTRALIA. Make what you will of these.*

Teresa Bengey of Ilfracombe was trapped in **Subsunk.** *If she read my recent scrolls she should have parts of the answer to all her problems. But how to open the safe? Once you have both parts of the map you must glue them together. Make sure you have the spatula, test tube and the toast scrapings — get these by using the knife on the toast. Mix them with the yoghurt you have melted in the reactor room to create a glue. Join the map, get the stethoscope and wear it. Now go to the safe and turn the wheel in the directions shown on the map.*

I owe great thanks to Karl Miles of Castletown for this news and the complete solution to the quest. Teresa, "in desperate need of help," was also unable to cross the light beam in **Ship of Doom.** *This is easily breached by shining the torch at the beam.*

Craggy Craig of Frome, Hamilton of Stone and the Dancer Dancey of Birkenhead beset me with questions on the defeat of **The Sorcerer of Claymorgue Castle.** *One could not open the stone door, the others could not leave the magic fountain without being killed, or avoid destruction when the chandelier fell on their heads.*



Sorcerer of Claymorgue Castle

That great journeyer, Mark Thomas, again provided the answers. "To release the chandelier safely, go into the ballroom, cast the Unravel spell — found in the plain room — and immediately leave the ballroom. Enter again only after you have heard the chandelier crash to the ground.

"The stone door can be opened thus: wring out the soggy towel; it will turn into a damp towel. Go to the plain room, hit east and then cast the seed. The door should now open. If you wish to get the stars from the dungeon and the fountain you will need the Yoho spell, the dry towel, and be glowing from a Firefly spell. Go onto the fountain, take the star, climb the centre, go shaft and dry the droplets. Now drop the towel, take the star and cast the Yoho spell to escape."

Lee de Thornton, in search of **The Eye of Bain** *asked how to get past the ravine or board the ship without being enslaved. He may only jump the ravine if he has the whipping post. The best way to avoid a life in the slavepits of Gragnoth is to kill the pirate without delay — examine his remains after, for he carries an essential hook.*

Perth Payne of Reading and Mario Ricci of Genova, Italy demanded aid with the **Tower of Despair.** *Says Payne, "I cannot prevent the Hellgaunt from reaching the Tower. I meet it on the bridge but it always destroys me." I verily believe that the answer to this doom is to point your gauntlet at the creature and then flamebolt it. Mario wished to know what use the mute servant may be. He, Sir Mario, is giving you a message bearing on flamebolts.*

Sir Mario did not know what to do with the crucible in Tylon's castle in **Kentilla.** *This is a means of obtaining graphite. First examine the talisman, remove the diamonds with the sword and then put them in the crucible. Turn the furnace on and place the crucible within it — so is the graphite made.*

And now a plea from Runor Tickhill of 35 Wilson Avenue, Deal, Kent. Runor is utterly bewildered by the **Paradox** *of Runesoft. This poor traveller seeks any help you can offer. Alas, it is not a path I have travelled nor too, is* **Executive Adventure** *for the QL. St Clair of the Furrowed Brow, 6 Chapel Road, Great Eversden, Cambridgeshire cannot find the passwords or get out of the laundry. Help him unknit his brow.*

Those of you who are lost in **Eureka, Heroes of Karn, The Ket Trilogy, Forest at World's End** *and* **Fantasia Diamond, Message from Andromeda** *and* **Twin Kingdom Valley** *should apply to the ubiquitous Thorne the Slayer at 28 Berry Hill Lane, Mansfield, Notts NG18 4BW. He will answer queries if you prepay the return courier.*



Mountains of Ket

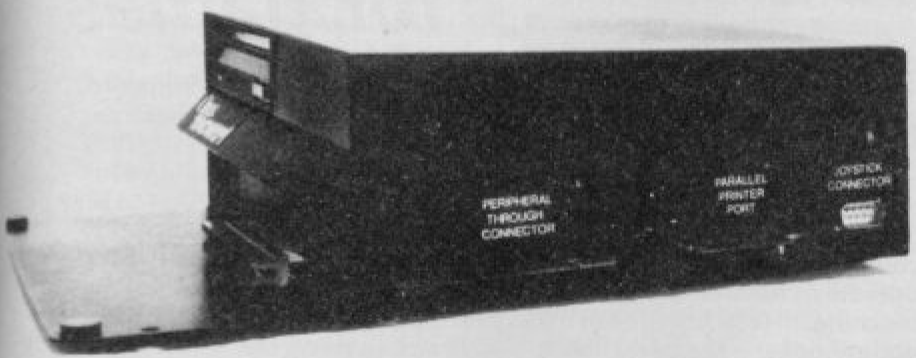
So to bed, in an earnest hope that we shake off our escorts on the morrow, or we shall have to buy camels from them to cart off the carpets and carvings. Ah, the lost spirit of the wild desert. Romance is dead. Till next moon, friends, ride safely.

Greatbelly

Gordo Greatbelly, Landlord and carpet warehouseman

If your have a tale to tell, or are in need of a helping hand, write to the Landlord of the Dancing Ogre c/o Sinclair User, Priory Court, 30-32 Farringdon Lane, London EC1R 3AU.

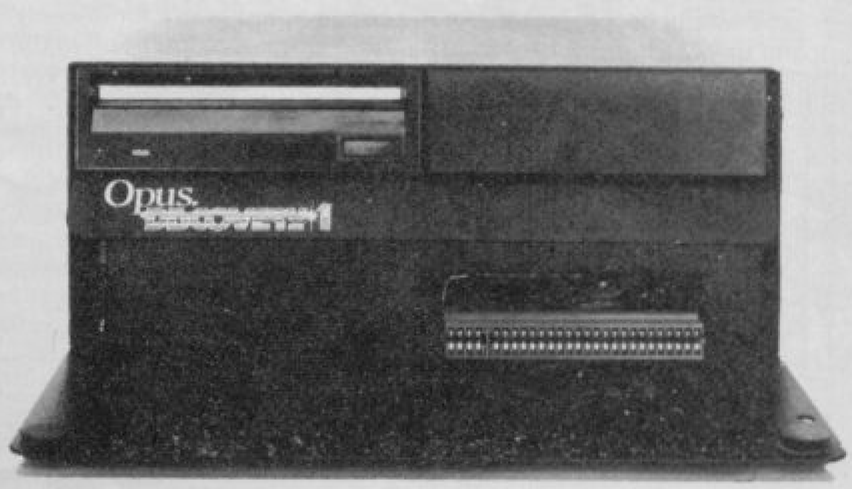
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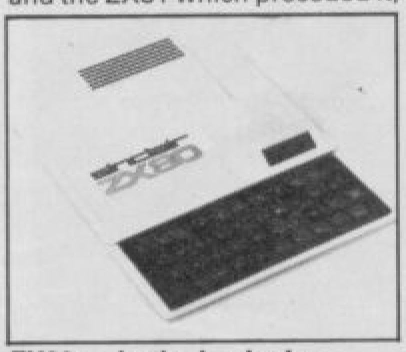
The Sinclair Story

For the benefit of new users, Andrew Hewson takes a trip down memory lane

A SIMPLE question to start with from Frank Woolton of Hackney. He writes: **I have a Spectrum Plus. Can I use Spectrum 48K games on my computer?**

Yes, you can. It is now nearly four years since Sinclair launched his first Spectrum home computer, so it is worth reviewing the history of the machine for recent purchasers.

The Spectrum was originally launched in two versions — 16K and 48K. The design was, incidentally, based on the ZX80 and the ZX81 which preceded it,



ZX80 — in the beginning

and there were some distinct features of the Spectrum carried forward unnecessarily from the earlier computers.

The 16K and 48K machines differed only in the amount of RAM memory. The amount of RAM available determines the length and therefore, to some extent, the complexity of the programs which the computer can run.

The public soon demonstrated that the 48K machine was preferred. The manufacturers and others offered upgrades to 16K purchasers, and before too long the 16K machine was withdrawn. Independent software suppliers upgraded or withdrew their 16K programs.

That situation continued until late 1984 when Sinclair launched the Spectrum Plus. The keyboard of the original Spectrum 16K and 48K, while far superior to the plastic sheet of the ZX80 and ZX81, was unsatisfactory and a source of criticism from all quarters.

With the Spectrum Plus the manufacturers discarded the original case and keyboard and brought in a few cosmetic changes, such as the provision of a reset switch. They also redesigned the internal printed circuit board — not for the first time — but the operation of the machine, so far as the user was concerned, was unchanged from the 48K computer. Thus all software written for the Spectrum 48K will run on the Spectrum Plus and vice versa.

The same cannot be said of the recently introduced Spectrum 128K. For reasons which I will not go into here,



ZX81 — a real breakthrough

48K of RAM is the maximum amount which the Spectrum can drive without going into some fairly complex jiggery-pokery. In bringing in the 128K computer Sinclair has had a go at the jiggery-pokery by designing the machine to operate in two distinct modes.

In 128K mode some use can be made of the extra 80K of memory onboard, although it is not as convenient to get at as it might be. In 48K mode the computer is supposed to operate as an ordinary 48K/Plus machine. In fact, because of the jiggery-pokery, the operation is not quite identical. Some commercial software, especially that written before the design of the 128K became widely known, makes assumptions about the state of the 48K machine which do not hold true for the 128K machine.

Fortunately, not too much software is affected by the changes. The official Sinclair estimates is that 98 per cent of 48K/Plus programs also run on the 128K.

Thus, in summary, 16K programs run on the 48K machines but not necessarily vice versa; all 48K programs run on the Plus and vice versa; Plus programs probably run on the 128K but not necessarily vice versa.

128 — the final product



A plug for games

Gerald Bishop, of Winsford, Cheshire, bought a Spectrum Plus for his son, thinking that the only thing you could use a home computer for was to play games. Now he's a convert to the *Sinclair User* cause and is busily devouring back issues of the magazine, library books and so forth. He's even attempted to set up his own local user group.

His question concerns the use and meaning of Peek and Poke, which I shall come to in a minute, but because his letter is so contemptuous of the games-playing fraternity let me make one point before I start. While the average game may be fairly frivolous at best and totally mindless at worst, the sophistication of the computing which lies behind it is deadly serious.

Hence there is a great deal the average Sinclair user can learn about the capabilities of the home computer from studying commerical programs. Remember that the commercial programmer,

Controlling PRINT AT

Continuing our tour of the system variables, this month we stop off to have a look at the way in which the PRINT and PRINT AT commands are co-ordinated.

These two commands are amongst the most complex available from the ROM because you are able to print single or multiple characters and the contents of several types of variables. The system also uses the commands internally to list programs to the screen, printer or microdrive etc.

Hence we shall only look at a couple of the controlling variables — those used to monitor the Printing position on the screen. The first is called DF CC, and is held at 23684 and 23685, which together give the address in the display file to be used by the top byte of the next character to be printed. To see this, turn your Spectrum off and on again, or hit the reset button if you have a Spectrum Plus. Then enter

```
LET disp = PEEK 23684 +
256 * PEEK 23685 : PRINT
disp
```

The value printed is 16384 — the address of the beginning of the display file, corresponding to the top left corner of the screen.

You have to be careful when Peeking at the value of system variables, because you are using the system to look at itself. Sometimes the values can change as a result of your using the system. Try entering the same Basic line again without resetting first. This time the value printed is 16416, corresponding to the top byte of the first character of the second line on the screen.

*There are 32 characters on a single sceen line, so at first sight it is not surprising that the two values for DF CC corresponding to the beginning of the first and second lines, 16384 and 16416, differ by 32. Not surprising that is, until it is remembered that each character displayed on the screen requires eight bytes in the display file to store the corresponding information. Hence we might expect the two values to differ not by 32 but by 32 * 8 = 256, but that is not the case because of the unusual layout of the Spectrum display file.*

I have written at length about the Spectrum display file before, most recently in the January issue, so I won't repeat

whatever advantage he may have over the amateur in terms of the environment in which he develops his programs, has no advantage in terms of the equipment on which his product must eventually run. There is no secret ingredient available only to a few privileged workers.

Thus you too, given time and patience, can learn how to do anything which appears in a commercial program, whether it be super high-speed graphics in an absurdly trivial game, or compressed script and fancy window techniques in a sophisticated word processor.

Returning to Gerald Bishop's question he asks: **'What are Peek and Poke for?**

I'm not sure that they are 'for' anything, but they are certainly useful if you are interested in scrabbling around inside the memory to find out what is going on and how your machine works. Taking Peek first, it is a function which takes the form:

PEEK address

The address can be any positive whole number between zero and 65535 inclusive. Alternatively, it can be a positive number which when evaluated yields such a positive number.

The Peek function returns the value which is currently held at the address in memory referred to. In the Spectrum the first 16K of memory is so-called Read Only Memory, or ROM, which is fixed and immutable. Peeking into this area, between addresses zero and 16383 inclusive, always gives the same result. Try it and see — you can't do any harm. Use a command such as

PRINT PEEK 1000

It is this area of ROM memory which gives the Spectrum its distinctive character. The execution of the Peek function, together with all the other Basic functions and commands, is controlled by the contents of the ROM.

If you execute lots of PRINT PEEK commands you will observe that the result is always a positive number between zero and 255 inclusive. That is because there are 256 arrangements only of the eight bits which comprise each byte of memory at each address. The number of arrangements which the 16 bits constituting two adjacent bytes can take is 256 * 256 = 65536. For reasons which are not at all coincidental there are 65536 bytes of memory — 65536 different addresses in the 48K Spectrum and Spectrum Plus.

So much for Peek. If you Peek the addresses in RAM — those between 16384 and 65535 inclusive — you will find that they, too, only take values between zero and 255. Mostly the values discovered will be zero, corresponding to unused memory.

The Peek function is fairly bland. The Poke command, in comparison, is much more fun because it is used to alter the contents of memory. It takes the form:

POKE address , number

where the address lies between zero and 65535 inclusive as before, and the number lies between zero and 255 inclusive.

If you Peek a number into an address less than 16384 you will have no effect — because you are attempting to Poke ROM which is fixed and immutable — remember? Try:

```
PRINT PEEK 1000
POKE 1000 , 47
PRINT PEEK 1000
```

You will find that the contents of the address remain unchanged despite all your efforts.



Not so if you Poke a number into RAM. For the most part your change will be permanent, unless your Spectrum has other ideas for the memory location in question. Try a number of RAM addresses to see what happens but be careful — you are sticking a spanner in the works. You cannot do any permanent damage but you may cause some unexpected effects, and if the worst comes to the worst you may have to unplug or reset and start again.

the detail here. Suffice it to say that the value of DF CC increases by one as the Print position moves along a line and by 32 as it moves down the screen. That holds true except when moving from eighth to ninth line and from the sixteenth to the seventeenth line. In these two cases DF CC increases by 1824 bytes, not 32.

The other two system variables which we shall look at are called S POSN and are held at 23688 and 23689. Those two addresses each hold an integer number. The first is related to the column number to be used by the next Print instruction — or set by a PRINT AT instruction — and the second is related to the line number.

Remember that the Sinclair convention in the PRINT AT is to label the top line as line 0, the next line as line 1, the next as line 2 and so on up to 21 for the bottom line of the display. Just to make life a little difficult, the value stored at address 23689 is not the line number but the value obtained when the line number is subtracted from 24.

Similarly the Sinclair convention is to label the display column at the far left as column 0, the next as column 1 and so on up to column 31 for the rightmost column. The value stored at address 23688 is, however, the number obtained when the column number is subtracted from 33.

To see how these values vary RUN the following program:

```
10 FOR i = 0 TO 21
20 LET col = PEEK 23688 :
   LET line = PEEK 23689 :
   PRINT col , line
30 NEXT i
```

The value of "col" is always 33 because each printed line is placed at the left side of the display. The values of "line" goes down by one each time from its initial value of 24.

The program listed in table one demonstrates how the values of the relevant system variables change as the Print position moves around the screen. It allows you to select PRINT AT position. The program then calculates the values required for the system variables so that a test message commences at the chosen position. The test message is printed, followed by the values of the system variables. The second part of the program, starting at line 2000, is triggered when you press a key. The screen is cleared and a PRINT AT command is then used to print an identical message at the same position and the system variables are displayed again, proving that the correct values were calculated originally.

```
100  INPUT "ENTER LINE NUMBER " : LINE
110  IF LINE < 0 OR LINE > 21 THEN BEEP .5.1 : GO TO 100
120  INPUT "ENTER COLUMN NUMBER " : COLUMN
130  IF COLUMN < 0 OR COLUMN > 31 THEN BEEP .5 . 1 : GO TO 120
140  POKE 23688 . ( 33 - COLUMN )
150  POKE 23689 . ( 24 - LINE )
160  LET P = 16384 + 32 * LINE + 1792 * ( LINE > 7 )
       + 1792 * ( LINE > 15 ) + COLUMN
170  POKE 23684 . P - 256 * INT ( P / 256 )
180  POKE 23685 . INT ( P / 256 )
190  LET C = PEEK 23688
200  LET L = PEEK 23689
210  LET DISP = PEEK 23684 + 256 * PEEK 23685
300  PRINT " THIS MESSAGE IS PRINTED AT LINE " ; LINE ;
       " AND COLUMN " ; COLUMN
310  PRINT C , L , DISP
2000 REM   DEMONSTRATION THAT CALCULATIONS ARE CORRECT
2010 PAUSE 0 : CLS
2020 PRINT AT LINE . COLUMN
2030 LET C = PEEK 23688
2040 LET L = PEEK 23689
2050 LET DISP = PEEK 23684 + 256 * PEEK 23685
2060 PRINT " THIS MESSAGE IS PRINTED AT LINE " ; LINE ;
       " AND COLUMN " : COLUMN
2070 PRINT C . L . DISP
```

Table 1. A Spectrum program which shows how the system variables at addresses 23684, 23685, 23688 and 23689 are used to control and monitor the display position on the screen

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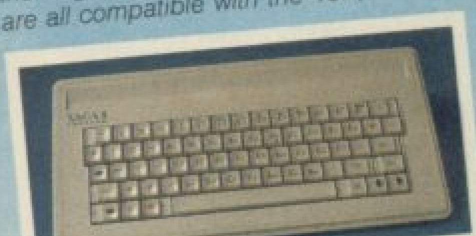
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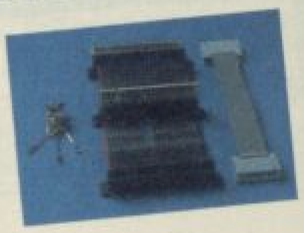
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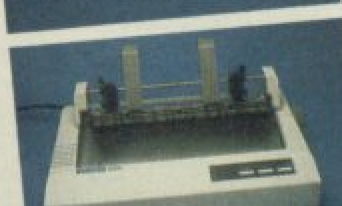
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Vorsprung durch technik

AROUND THE WORLD, unlike most of Britain, the QL is seen as a serious business machine — and, at present, the trendy thing in business machines is Mice, along with Windows, Icons and Pointers — WIMPS for short. It's hardly surprising, therefore, that the first mouse for the QL should come from abroad.

Figure 1. ABC Giga-Desk (EASE) Picture Icons

_BAS
_DOC
_GRF
_ASM
_DBF
_PRO
_PRG
_EXP
_ABA
_EXE
_DAT

ABC Elektronic from Bielefeld, West Germany, in conjunction with Giga-Soft, has produced a mouse, and software, which brings the QL into line with the Apple Macintosh, IBM PC and Atari ST.

The first half of the software, known as the **Easily Applicable System Environment** or **EASE** for short, is a GEM-like environment which completely insulates you from the QL operating system. From the moment the power is turned on it allows you to operate the QL by using the mouse to move a pointer around the screen and select various options.

The second half of the software contains a number of SuperBasic extensions which let you use the mouse within your own programs. These include the necessary pull down menus, windows, etc plus a host of features that compare very favourably with the original Tony Tebby **Toolkit**.

EASE

Faced with a computer for the first time — it is often difficult to work out what to do. **EASE**, and its forebears GEM and the Macintosh, work on the basis that sign language is universal, and use signs — icons — to represent parts of the computer. Using the mouse these icons can be selected and when one of the buttons on the mouse is pressed, it indicates that a particular part is to be used.

For example, when **EASE** is first loaded a number of icons are displayed down the right-hand side of the screen with the pointer positioned over the icon of a disc. Clicking the button opens a window with a directory of the disc — **EASE** is configurable for both disc and microdrive, but uses disc icons on the assumption that serious users will be using discs.

The window displays the file names on the disc in the form of more icons. Some of these — see figure one — are miniature representations of the file type. A filing cabinet for **Archive** files, a sheet of paper covered in writing for **Quill** files, even a little truck for Export files. Using the mouse the window can be enlarged, moved around or, if there are too many files to fit into the window, scrolled.

A file is marked by clicking the mouse when the pointer is over it, and these marked files can then be manipulated by selecting an option from the menu bar at the top of the screen. To select an option the pointer is moved onto the bar and the mouse clicked. A sub-menu then appears under the option and as the pointer is moved up and down these sub-options are highlighted. Clicking the mouse again performs the relevant function.

The system allows you to copy files, send a file to the printer or screen or execute a program. All this moving and clicking may seem tiresome but it is generally easier and more fun than typing in a long command.

Other options let you control the mode — TV or monitor — the default devices — microdrive, printer, disc — and method of display and speed of operation. The mouse moves the pointer around the screen very quickly but in steps of about five to six pixels; using the cursor keys slows it down.

As with the Macintosh there are two gimmick options — a calculator and a game. The calculator has a host of functions but uses Reverse Polish Notation; the game is that old favourite, the sliding block puzzle.

Overall, **EASE** performs its functions well and is simple to use. It's a shame that programs executed from it, such as **Quill**, do not retain the use of the mouse — at least only erractically — but you can't have everything. If you want a user-friendly interface, this is it.

Giga-Basic

While **EASE** is a good enough program in its own right, use of

Figure 2. ABC Giga-Basic
Additional Commands

SCREEN	MC_PROCEDURE	$000BAD3E
CAT	MC_PROCEDURE	$000BAD62
PAINT	MC_PROCEDURE	$000BAD7A
ACLOCK	MC_PROCEDURE	$000BB558
DCLOCK	MC_PROCEDURE	$000BB5C0
DUMP	MC_PROCEDURE	$000BADB4
HRDCOPY	MC_PROCEDURE	$000BADC6
JOB_INF	MC_PROCEDURE	$000BC296
KILL_JOB	MC_PROCEDURE	$000BC25C
REL_JOB	MC_PROCEDURE	$000BC268
SUS_JOB	MC_PROCEDURE	$000BC262
PRIOR_JOB	MC_PROCEDURE	$000BC26E
GET	MC_PROCEDURE	$000BCBE0
PUT	MC_PROCEDURE	$000BCC78
BGET	MC_PROCEDURE	$000BCC3C
BPUT	MC_PROCEDURE	$000BCCB0
SET_POINTER	MC_PROCEDURE	$000BCCD8
KEYS	MC_PROCEDURE	$000BBF82
KEY	MC_PROCEDURE	$000BBF1C
KEYSON	MC_PROCEDURE	$000BBED8
KEYSOFF	MC_PROCEDURE	$000BBF00
SYSTEM	MC_PROCEDURE	$000BC3C2
COMMANDS	MC_PROCEDURE	$000BADE6
SPRDIM	MC_PROCEDURE	$000BADF8
INVMASK	MC_PROCEDURE	$000BAE14
SPRDEFBLOCK	MC_PROCEDURE	$000BAE26
SD4	MC_PROCEDURE	$000BAE30
SD8	MC_PROCEDURE	$000BAE44
SPRCLR	MC_PROCEDURE	$000BAE58
SPRON	MC_PROCEDURE	$000BAE62
SPROFF	MC_PROCEDURE	$000BAE6C
MOVESPR	MC_PROCEDURE	$000BAE76
REFRESH	MC_PROCEDURE	$000BAEA2
SETANIMATE	MC_PROCEDURE	$000BAEAC
STEPSPRITE	MC_PROCEDURE	$000BAEC8
CLRANIMATE	MC_PROCEDURE	$000BAEDC
ANIMATE	MC_PROCEDURE	$000BAED2
SPRLOAD	MC_PROCEDURE	$000BAF12
SPRSAVE	MC_PROCEDURE	$000BAF1A
INVSPRITE	MC_PROCEDURE	$000BAF40
MENUDIM	MC_PROCEDURE	$000BAF82
MENUBLOCK	MC_PROCEDURE	$000BAFA6
MENUCLR	MC_PROCEDURE	$000BAF9C
MENUPR	MC_PROCEDURE	$000BAFB8
ICON	MC_PROCEDURE	$000BB010
INVBLOCK	MC_PROCEDURE	$000BB022
CLRBLOCK	MC_PROCEDURE	$000BB056
MENU	MC_PROCEDURE	$000BB064
SETMENU	MC_PROCEDURE	$000BB0A8
GETMENU	MC_PROCEDURE	$000BB0C6
ACTIVE	MC_PROCEDURE	$000BB0DC
SETMON	MC_PROCEDURE	$000BB106
SETTV	MC_PROCEDURE	$000BB10C
MONSCR	MC_PROCEDURE	$000BB13C
TVSCR	MC_PROCEDURE	$000BB14E
SETFONT	MC_PROCEDURE	$000BB160
SETMDEV	MC_PROCEDURE	$000BB1A6
SCRSTORE	MC_PROCEDURE	$000BB1B2
SCRLOAD	MC_PROCEDURE	$000BB1C6
SCRCLEAR	MC_PROCEDURE	$000BB1BC
MOUSE	MC_FUNCTION	$000BB030
CHEX	MC_FUNCTION	$000BCA10
CHEX$	MC_FUNCTION	$000BCB72
CBIN	MC_FUNCTION	$000BCA68
CBIN$	MC_FUNCTION	$000BCB2A
GET_POINTER	MC_FUNCTION	$000BCCF4
FREE	MC_FUNCTION	$000BC478
SPRXPOS	MC_FUNCTION	$000BAEE6
SPRYPOS	MC_FUNCTION	$000BAEF4
COLLOSION	MC_FUNCTION	$000BAF04
SPRACTIVE	MC_FUNCTION	$000BAF4A
VMENU	MC_FUNCTION	$000BB0F6
HMENU	MC_FUNCTION	$000BB0E8
GETMODE	MC_FUNCTION	$000BAF68
SPRBLKADR	MC_FUNCTION	$000BAF58
MXPOS	MC_FUNCTION	$000BB188
MYPOS	MC_FUNCTION	$000BB196



Figure 3. ABC Giga-Basic

Sample use of the SYSTEM command
Systemvalues:

SV_HEAP	: $0002C400	181248
SV_FREE	: $000B3000	733184
SV_BASIC	: $000BAA00	764416
SV_TRNSP	: $00000000	0
SV_RESPR	: $000BAA00	764416
SV_RAMT	: $000C0000	786432
BASIC	: $00005FDE	24542
VARIABLES	: $00000010	16
NAMETABLE	: $00000713	1811

the mouse would be rather limited if that was all it could do. So that you can use the mouse in your own programs there is a further program, **Giga-Basic**, which adds over 70 new commands to SuperBasic — see figure two.

It should be noted that unlike **EASE** the **Giga-Basic** cartridge is protected. You can clone it three times or make as many backup copies as you like so long as a master is in drive one when it is loaded.

Giga-Basic is an excellent program. There are too many new commands to detail, but even if you do not want to write mouse-driven programs there is still enough to make it worth looking at.

For the mouse programs there are extensive and easily used commands to define menus, pull down menus, read windows and icons. Once defined, selecting a menu item is largely automatic. The icons are a variation on the sprite commands which are also extensive. You can define them, load and save them, animate them, move them around and even detect collisions.

For filing programs there are a range of random access commands to PUT and GET bytes or variables, or to set a pointer in the file. Base conversions are possible in both directions between decimal and binary. Multi-tasking jobs can be activated, suspended, killed or their priority changed. The function keys can be programmed and the mode — TV or monitor, four or eight colour — can be set or determined.

Two clocks are available, digital or analogue, and new fonts can be created and activated in selected windows. There is an extended directory, a screen dump to an Epson printer, and a dump of some of the system variables — figure three. Also there is a dump of all the SuperBasic variables used and procedures with line numbers — figure four — and the amount of free memory. Lastly, there is a full screen editor — you can choose which window to edit in — which is very easy to use and far better than the one in the Tony Tebby **Toolkit**.

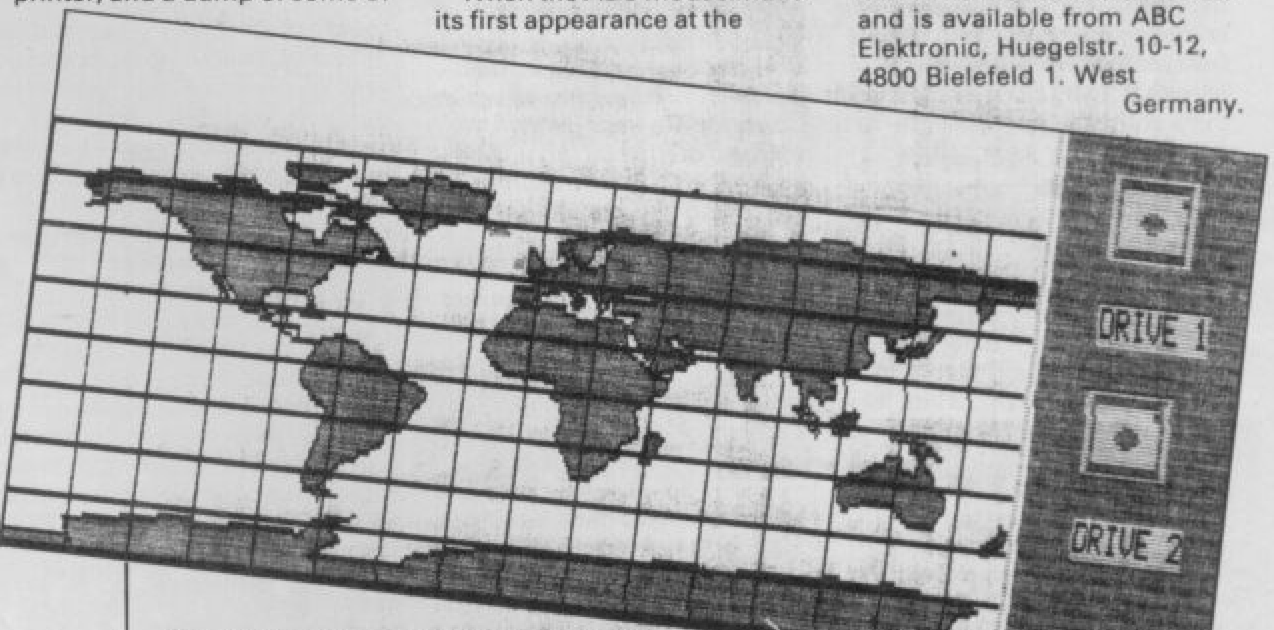
Whether you use the mouse or not, **Giga-Basic** is worth buying. Its range of features makes writing programs so much easier.

As an example of this there are two further programs on the cartridge which use these extensions. One is a sprite designer and the other a map-drawing program.

When the ABC mouse made its first appearance at the Christmas Microfair last year it suffered from a number of problems. Firstly, it was not reliable — that has now been solved with new software which performs well. Secondly, it lacked any form of manual, other than a single sheet of A4 paper. There is now a full English manual.

Lastly, while the Europeans are used to dealing with different countries the British are reluctant to send money abroad. This, coupled with the difficulty in obtaining support in the event of problems, has lead to few of the mice finding their way into the country. ABC is negotiating with a British company to provide support.

Until Eidersoft brings out its mouse, ABC has the field to itself. The mouse costs DM 220 and is available from ABC Elektronic, Huegelstr. 10-12, 4800 Bielefeld 1. West Germany.



Above: an example of the map-drawing program included with the Giga-Basic package.

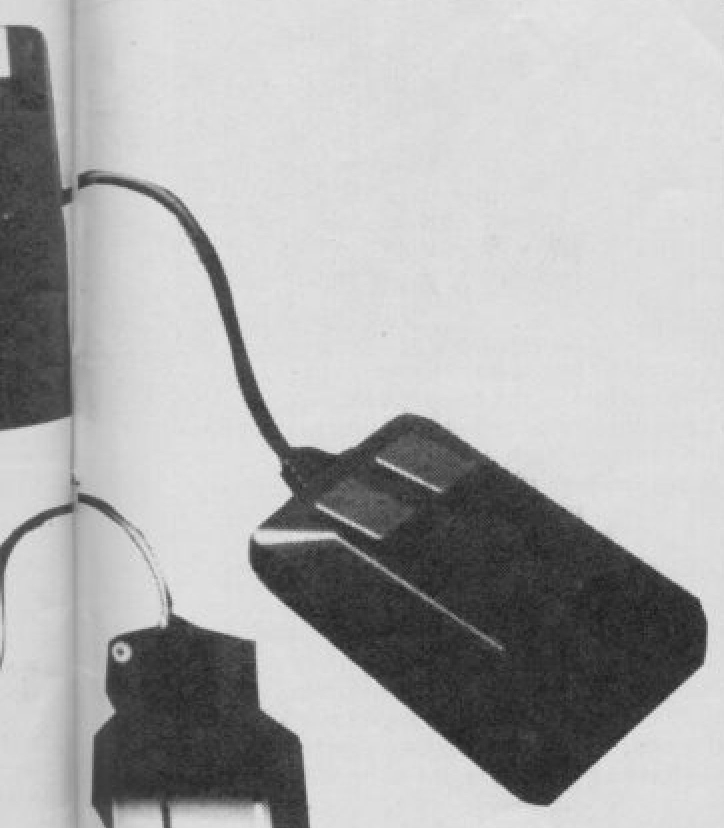


Figure 4. ABC Giga-Basic

Sample use of the DUMP command

modus	FLP_VAR	*
newfount	SB_PROCEDURE	5300
pcol	FLP_VAR	*
bcol	FLP_VAR	*
icol1	FLP_VAR	*
icol2	FLP_VAR	*
men_init	SB_PROCEDURE	3290
sprinit	SB_PROCEDURE	4040
globinit	SB_PROCEDURE	450
HLOOP	FLP_VAR	*
x	FLP_VAR	*
projektion	SB_PROCEDURE	4570
file	SB_PROCEDURE	4680
smodus	SB_PROCEDURE	4500
colour	SB_PROCEDURE	4900
ex	SB_PROCEDURE	5190
GWINDOW	SB_PROCEDURE	3620
blk	FLP_VAR	*
globus	SB_PROCEDURE	710
za	FLP_VAR	*
z	FLP_VAR	*
wi	FLP_VAR	*
t	FLP_VAR	*
j	FLP_VAR	*
l	FLP_VAR	*
b	FLP_VAR	*
rechnen1	SB_PROCEDURE	1460
x1	FLP_VAR	*
y1	FLP_VAR	*
y	FLP_VAR	*

i	FLP_VAR	*
x2	FLP_VAR	*
y2	FLP_VAR	*
nn	FLP_VAR	*
bb	FLP_VAR	*
ll	FLP_VAR	*
v	FLP_VAR	*
karte	SB_PROCEDURE	1580
temp$	STR_VAR	*
wbreite	FLP_VAR	*
rechnen	SB_PROCEDURE	2020
nr	FLP_VAR	*
sgn	SB_FLP_FUNC	2230
sa	SB_PROCEDURE	3250
XSIZE	FLP_VAR	*
YSIZE	FLP_VAR	*
XO	FLP_VAR	*
YO	FLP_VAR	*
titel$	STR_VAR	*
chars	FLP_VAR	*
charx	FLP_VAR	*
temp	FLP_VAR	*
a$	STR_VAR	*
temp1	FLP_VAR	*
temp2	FLP_VAR	*
marker$	STR_VAR	*
fount	FLP_VAR	*
mo	FLP_VAR	*
savepic	SB_PROCEDURE	4770
name$	STR_VAR	*
gclose	SB_PROCEDURE	5480
ystep	FLP_VAR	*
farbe	FLP_VAR	*
a	FLP_VAR	*

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Monitoring eye strain

IS IT true that you can use a Ferguson MCO5 or a Sony KV-1412UB as a computer monitor?

If so, can you sit right in front of those TVs without spoiling your eyes?
Sheldon Fernandes, London SW19

● *Both TV/monitors can be used with the Spectrum but you will need an interface to get the best from them. Staring at a screen doesn't do a lot for the eyes at the best of times, try to get as far away as possible.*

Saving confusion

I USE a WH Smith data recorder to load programs onto my Spectrum. However, when it comes to saving programs the recorder doesn't work.

Can you tell me where the leads are supposed to be plugged into the recorder? I realise that the Ear lead should be removed when saving.
Sally Buchanan, Higham, Kent

● *One lead goes from the MIC socket on the Spectrum to the Save socket on the recorder, the other goes from Ear to Load.*

Is everything present?

I AM writing a program where I want to both save and load data. The problem is that I want to use Basic to check if the microdrive or the tape recorder are present. I also want to check if the printer is connected to the RS232 interface or Interface 1. Please help.
Vivian Hankey, Burton upon Trent, Staffordshire

● *It is possible to check if the microdrive is present but only from machine code. You cannot check for a printer without actually printing something and, unfortunately, there is no way of telling if a cassette deck is present.*

I suggest you read Master Your ZX Microdrive *by Andrew Pennell, published by Sunshine Books, priced £6.95. It contains, amongst many useful programs, a status checker for the microdrive.*

Commodore bashing

IS THERE any way a Commodore DPS 1101 daisy wheel printer can be interfaced to operate with a Spectrum Plus?
George Goult, Brentwood, Essex

● *Might as well have a go at Commodore bashing as well. Commodore uses its own method of interfacing which nobody else uses. In some cases you can convert things like printers but you will have problems with this one. Try your local computer repairers but don't hold out any hopes.*

No standards at Amstrad

I AM hoping to get a Spectrum 128K and was wondering if the Amstrad PCW 8256 printer can be attached?
Nick Gitsham, Bracknell, Berkshire

● *The 8256 printer is about as non-standard as you can get; it relies on the 8256 and cannot be used without it. If you want to use any standard printer with the 8256 you will have to spend another £50 on extra hardware, and even then Locoscript will have problems driving it.*

Switching keyboards

I HAVE a Spectrum Plus upgrade kit but have put off fitting it as I don't want a straight swop.

In order to be able to use the old keyboard and overlays for games, I want to be able to switch from one keyboard to the other by building a terminal with both adjacent. The switching of 13 poles will probably be accomplished by edge-connectors. This will involve an increase in the length of the keyboard ribbon cables. The point is, to what length can they be extended?

Where can I buy the longer ribbon with printed circuits at either end?
R Crawley, Hitchin, Herts

● *The problem is not only one of length but also capacitance. Your best bet is to try and see what happens. Take the signal direct from the ribbon cables.*

A question of light pens

CAN YOU tell me where and how much it would cost to fix a 48K Spectrum adaptor? Which light pen is best for a beginner and where can I order one?
Mark (age 13)

● *The cost of repairing an adaptor depends on the adaptor. The best light pen for the Spectrum I have seen is from Trojan Products, 166 Derlwyn, Dunvant, Swansea SA2 7PF. Tel: 0792-205491. Priced £17.95.*

Digit cushions the blow

HANDS UP everyone who thinks that the Spectrum Plus or QL keyboard could do with some improvement — one, two . . . one million and one, one million and two . . .

Digit, from Frel Ltd, is a new approach to the age old problem, what to do with your Sinclair keyboard? While Spectrum users can always upgrade to a third party keyboard, QL users have, until now, been stuck.

In essence, Digit consists of a number of small metal springs that replace the rubber mat which lurks in the depths of the Sinclair keyboard.

Getting to the mat involves a major job of dismantling the computer which, needless to say, blows any warranty you may have. First, the top half of the computer is removed, then the back of the keyboard, and finally the rubber mat.

Now each key in turn has to be removed, a plastic plunger fitted into the existing plunger, a felt washer added — so that the top of the key's travel is cushioned — and the key fitted



back into the case. A second felt pad is positioned on the membrane to cushion the bottom of the key's travel.

Once the keys have been cushioned the springs are added, the back of the keyboard screwed back into place and the whole thing put back together. It shouldn't take you more than a couple of hours.

The instructions for all this are very thorough, as is tbe kit itself, even down to providing guide rods for the most difficult part, refitting the back of the keyboard.

Having used Sinclair machines for so long I have got used to pounding on the keyboard amid a loud rattling. With Digit fitted there is far less rattle and the keys require very little pressure. Just press down gently to the bottom of their travel and then give a slight additional pressure to make the key register. Not like the usual sudden rush when you press the normal Sinclair keys.

On balance, I think Digit is an improvement; I would have preferred slightly stronger springs but I tend to pound the keys too much anyway. Not bad for £9.95.

Frel Ltd, 1 Hockeys Mill, Temeside, Ludlow, Shropshire SY8 1PD. Tel: 0584-4894

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This suite of programs includes Sales Day Book, Purchase Day Book and Business Bank Account. These programs are being used by over 1000 companies to produce VAT and annual accounts; the Purchase and Bank Account programs allow for analyses under 17 subheadings. The Sales programs produce statements of outstanding invoices. Both Sales and Purchase programs calculate VAT.

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This program will print out invoices, calculates discounts and VAT. The program will calculate totals from unit prices. Up to 50 accounts with 250 outstanding invoices.

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This program is for use on microdrive or Opus Disc only. The program will print an invoice using a built-in price list and post the invoice to your customer's account. Will also print price list, statements, labels, etc.

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TASWORD THREE by Tasman £16.90p
This new version of Tasword is supplied on microdrive with the following features: 128 column print out, tabs, page footers, buffered typing, page headers, full insert mode, bulit mail merge

TASPRINT by Tasman Software £9.90p
Use this program with Tasword Two to produce 5 different fonts on a dot matrix printer.

SPREAD SHEET

OMNICALC 2 by Microsphere £14.95p
This is the long-awaited micro-drive version of omnicalc complete with histograms and many other features.

STOCK CONTROL

STOCK CONTROL. £10.95p
Handles 900 lines, including details of supplier. Program has full search facilities enabling you to search and update all lines from one supplier.

DATABASES

MASTERFILE by Campbell Systems £14.95p
This is one of the best database programs available for the ZX Spectrum. This program has many uses in a small business.

SUPERFILE. £14.95p
This is a new database program that stores pages of text 64 columns x 22 rows. The program includes word processing and full search facilities.

V-NOTCH. £12.95p
Index and Catalogue System, for collections of photographs, recipes, books, knitting patterns, stamps, etc. Up to 3500 items per file full search facilities.

BUSINESS GRAPHICS

HISTO-GRAPH. £10.95p
This program will enable you to present figures in histograms or pie charts. Displays 3 years as a direct comparison or 5 years to show a trend. A unique feature of this program is that all the figures can be printed with the histogram.

UTILITIES

DLAN by Campbell Systems £7.95p
Use your Spectrum to sell your products. Dlan will display messages in up to 11 different typefaces. Will scroll text in any direction.

TASWIDE by Tasman Software £5.50p
You can use this program within your other programs to display 64 columns on screen.

MF-PRINT by Campbell Systems £6.95p
Enables you to set a print format for your full-size printer within masterfile. Supplied complete with masterfile for **£19.95.**

TASMERGE by Tasman Software £10.95p
Allows you to transfer data from Masterfile into Tasword enabling you to use Tasword for mail merge. The program allows you to specify line and column of each field. For use on micro-drive only.

TRANSEXPRESS by Romantic Robot £9.95p
Micro-drive utility program which will enable you to back-up all your micro-drive cartridges.

TASCOPY by Tasman Software £9.90p
This program allows you to produce 3 sizes of screen copy using Interface 1.

New

SUPADRIVE £9.95
This program supplied on microdrive allows you to format a cartridge on the spectrum with 100-105K, retrieve corrupted files or print a full catalogue showing addresses and start lines.

ACCESSORIES

Blank microdrive cartridges	£1.99p
Microdrive storage boxes	£4.95p
RS 232 lead	£11.50p
Monichrome monitor connector	£11.50p
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Add £1.00 post for labels. £3.00 post for paper.

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Spectrum Monitor Connector	£10.00p	£11.50p

PRINTERS

DOT MATRIX		
Brother M1009	£129.82p	£149.30p
Epson LX80	£199.00p	£228.85p
Taxan Kaga	£210.00p	£241.50p
DAISY WHEEL		
Brother HR10	£245.80p	£282.67p
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Telephone for prices on other printers. Please add **£5.75p** for delivery on both printers and monitors.

DISC-DRIVES

Discovery 1 by Opus 178K	£149.90p
Discovery 2 by Opus 360K	£269.90p

QL

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VISA

A new lease of life for arcade classics

Sinclair Research raids the archives. John Gilbert watches with interest. . .

THOSE SQUEAKY clean marketing types at Sinclair Research still stick to the idea that the company's range of Spectrum software is top quality. I wouldn't agree, but the company is scoring points with its QL software.

The company started by badging QL utilities such as the **Macro Assembler** from GST, and **QL Paint** from Talent. Now, in line with the drop in price of the QL, Sinclair has decided that arcade style games will be popular with QL users.

Two of its latest releases rely on old arcade games themes — **Centipede** and levels and ladders. They are, however, more complex than your average golden oldie.

QL Jabber

Hunt the bugs in that great symbiotic system called outer space. You are an antibiotic armed with bug-busting missiles.

The first frames of the game bare a striking resemblance to that old arcade classic **Centipede.** The only difference is that you're stuck in the middle of the screen and you can only move across — not up or down. Those initial screens are a bad advertisement for the game which, if you don't persevere, will probably end up in the bin.



Once past the first four screens your spaceship is freed and you have to defend yourself against a cascading host of multi-coloured aliens. I notched up a respectable score of 15010 when the game plot changed, and once again I was in trouble.

The screen resembles a penny waterfall at a fairground with a stack of slanted runs down which the aliens roll. Their mission is to reach the rockets at the bottom of the screen and set them off to destroy one of your four lives.

Once past this phase things become easier. You still have to fight on the falls but this time the aliens are easier to kill as they are not confined to the shutes. I managed to get to level nine of 26 and, according to Sinclair, there are several other scenarios within this game of intergalactic pest control.

QL Jabber is a colourful and innovative game with a boring start. However, you can play it in two ways — for points or for levels of advancement. An option on the program's initial menu allows you to continue a game from where you left off after dying. You can use your four lives just to gain one level and then try a new level the next time around.

Alternatively, you can play for points and that means staying alive and hitting as many bugs as you can. Each type of bug has a score assigned to it. The highest scoring bug is Rabies and the lowest an Antibody, which you should not shoot. Inbetween we have Straphylococcus weighing in at 100 points, Streptococcus at 50 points and E. Coli at a mere 150 points.

All bugs are dangerous, but in later screens one bug will be transformed into something else when you hit it with a missile. Some transmute into falling stars while others turn red and yellow and follow you until they get you or are destroyed.

Arrakis, the company which wrote the game for Sinclair Research, is a name to look out for when deciding which future releases to buy. Hopefully it will continue to produce arcade games of such a high calibre.

Many of you may find **QL Jabber** easy to play. You have substantial freedom of movement and your laser weapons are devastating even on the higher levels of the game.

If you're not interested in arcade games with space as their backdrop, then underground capers in levels and ladders land could be for you. The second of Sinclair's latest releases takes the levels and ladders concept way beyond any plot that arcade game planners could have dreamed up in the early 1980s.

QL Quboids

Levels and ladders games seem to be popular with the software division at Sinclair Research; let's hope you will be equally enamoured.

The game is addictive, if repetitive. Your levels have been infested with beings from another universe. There are four types of alien — Nebulons, Gastroids, Bipods, Quboids — and you must kill off each type in order to reach the next screen.

You can kill Nebulons easily by digging holes to trap them — when they fall in, hit

Windows, Icons and Fonts

THE SCREEN DUMP program, published in the December issue of *Sinclair User*, gained such a good response from QL users that Eigen, the producer of the program, has decided to continue its QL range. **Windows, Icons and Fonts** is the result.

The program contains an upgraded version of the dump routine but its main task is to enable the creation of icons and user defined character sets.

When booted, WIF provides a menu of six options, the selection of which depends upon what you want to produce. To make life easy a window driver can be installed which adds some commands to SuperBasic. They include the usual open and close commands with the addition of right, left, up, down and swap. The latter

QL Super Astrologer

ASTROLOGERS and those interested in serious fortune-telling will be delighted with Digital Precision's **QL Super Astrologer** package. Whether or not you believe in Astrology, there's an enormous difference between the sun-sign predictions in the daily papers and the wealth of calculations which make up a full horoscope.

QL Super Astrologer provides fast and accurate calculations of the positions of planets by house and zodiac sign. It goes on to calculate the important aspects between planets, not only for a birth chart but also for progressions — the future positions of planets used to forecast trends. The chart can then be dumped to a printer.

Also included are text files for all the possible aspects and sitings of planets, in house and sign. Those can be printed out with the chart or separately so as to give an individual interpretation to each chart. Keen astrologers can edit those files to

four commands shift windows around the screen and swap or transpose one window with another.

To create a set of icons you must select the Icon Editor. That holds a file of 32 icons in memory and you can change the picture contents by selecting any one of them using a key number from one to 32.

Each icon comprises 22 squares in width and length, each of which can be inked or left blank to create an image. When you're happy with that icon you can either create another or save the block of 32 images to microdrive or disc.

The icons you have created can be used in your SuperBasic programs by loading in the icon driver. That activates a SuperBasic extension which has the format:

ICON index, x,y,paper,border

Index is the number of the icon in the file, X and Y mark the spot on the screen where you want it to appear, and paper and border invoke the colours in which you want to show it. The extension can, of course, be used with a channel specification.

You can also create fonts — character sets — using WIF. The Font Editor works in a similar way to the Icon Editor. There are 128 character blocks within each font file, those are accessible using a key number from zero to 127. Each character is four square components across and eight down. Characters are created using the same technique as that used with the creation of icons.

To use your fonts in SuperBasic programs you must invoke the Font Driver contained on the WIF cartridge. Once run it will provide three SuperBasic extensions. The QL has two character sets in ROM, one which is in operation at all times, and the other which can be switched in using a QDOS command. Using the SuperBasic extensions you can replace those two character sets or create a third.

The package includes two examples, one shows off the windowing capabilities of WIF and the other the icons. It is documented with an easy to understand manual and you will find that creating icon menus to represent tasks such as loading programs, or getting directories from microdrive will save time and make QL operation easier.

WIF is the best icon and character generation package I have seen for the QL and can be obtained through mail order for a very competitive price. Anyone who's fascinated with icons will be bowled over by WIF.

Publisher Eigen Software,
45 Bancroft Road, Widnes,
Cheshire WA8 0LR.
Price £9.95
★★★★★

them on the head with your pneumatic hammer and they'll die. If you fail to kill a Nebulon it will crawl out of the hole and turn into a Gastroid. Those creatures — which have to be faced when you've finished off the Nebulons — only die if they fall through two platforms; you will need to dig two holes, one under the other.

If you don't manage to kill a Gastroid it turns into a Bipod and has to tumble through three platforms before it dies. They change into Quboids — the most deadly creatures in the game — and can only be killed if they fall down four holes. Got it?

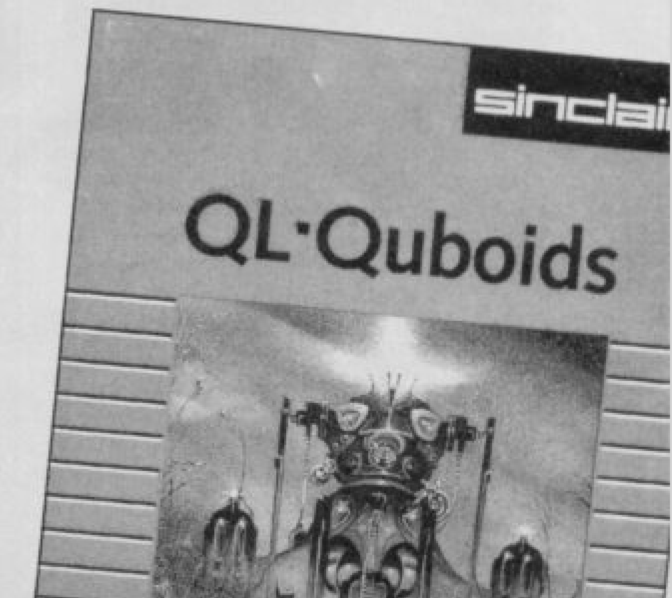
To keep the levels clean you will need to sustain your energy by eating fried chicken, and air which you collect from air bottles. Air and food balances are shown on the screen together with the number of lives left. If any of those readouts reach zero you'll have to start again.

The first two screens are easy and straightforward. One technique is to dig holes by the most important ladders in the bottom half of the screen and the monsters will fall into your lap. Once you get to the third level, however, the creatures become more intelligent and the speed at which they move makes them difficult to pin down or avoid, especially if you're on a ladder.

QL Quboids is certainly one of the better levels and ladders games but is restricting in the skills you need to develop. Once you know where to put the holes the creatures will fall quite happily into the traps you've laid.

Despite that minor criticism **QL Quboids** is an addictive romp which sports some classic arcade style graphics. Sinclair has also managed to keep the price down, so you should be able to play it without breaking the bank.

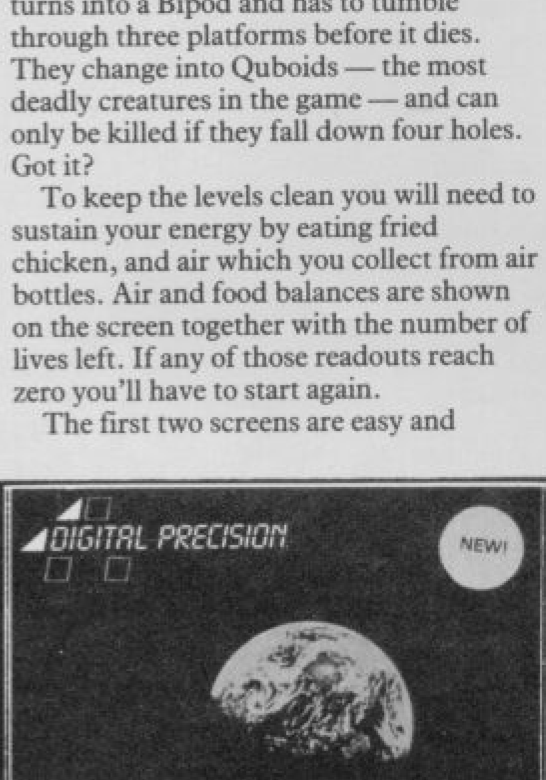
If Sinclair Research thinks it can lose its old reputation for second rate Spectrum software it would be wrong. However, the company is building a new reputation for good quality QL software as well as a lively marketing attitude for both the QL and Spectrum machines.



The company has shown that it can pick and market the best in utilities and business packages. Now it is showing that it knows the games business.

QL Jabber
Publisher Sinclair Research
Price £9.95
Programmers Arrakis
Joystick
★★★★★

QL Quboids
Publisher Sinclair Research
Price £9.95
Programmers AJS
Joystick
★★★★



include their own ideas on the meanings of various factors.

Freddy Vaccha and his team at Digital Precision have gone out of their way to make the system as open as possible, with instructions on how to modify the printer driver to suit your own system, and information on how the programs link together. There are also, on the second cartridge, a series of files with the data for famous figures in history clearly designed to impress you with the claims astrology makes. They make interesting reading even if you remain an unbeliever. This is an excellent package which produced some remarkable results when I ran my own and John Gilbert's birth data through it. Great fun, and an invaluable tool for astrologers who hate grinding through their own calculations for hours on end.

Chris Bourne

Publisher Digital Precision
Price £24.95
★★★★★

► 82

Nemesis

81 ◄

IT WAS a bumpy landing but you expected no less. The ship was built for space travel, not for rigorous descents onto rock-hard planets.

You're here on the orders of the Council of Elders in the Inner Sanctum of the Federation of the Seven Galaxies — yes, that one left me wondering about the sanity of the programmers as well. You've got to track down and capture Nemesis, the most dangerous man in the universe — with a name like Nemesis, it's no wonder he's so sought after.

The game is supplied on two cartridges, both of which should be cloned by the SuperBasic copy instruction. You must have both cartridges in the microdrives before you can load the game, and each of the game parts takes some files from both cartridges.

Once loaded, the only graphics in the game — a full screen picture of your spacecraft flying through starry skies — disappear. You are told to wait and the first text location description appears.

You are sitting at the helm of your spacecraft, a host of limited options before you. Going north brings you to a wrecked city, branching to the west takes you to a river beyond which lies a forest, and treking off to the east brings you to a bridge which is guarded by a sleek metal robot.

The robot is a killer and will not let you cross the bridge at any cost — a bit like some trolls I know. Despite throwing a knife and shooting at him with a laser gun I was unable to destroy the beast.

The city is just as deadly an environment as the bridge and no place for a rank beginner. When you get to the outskirts the shadows start to move. As you walk down the alleyways red eyes peer out of the darkness and nameless creatures attack you. Now is the time to take one of the two avenues of escape.

You can either dash into an alley — but that is a dead end — or sneak through a door into a dark and dingy room. The room contains some rather uninteresting objects such as a ball of string, a pair of scales, a torch and a spade. All very useful if you can escape from the city alive.

I was almost prepared to forgive the authors for the standard awfulness of the plot until I saw how the text interpreter handled my commands. It scans the text of an input and takes out the parts it can understand. It then replies to the best of its ability — a feat which is dispiriting to watch. For instance, I tried, "Beat up the robot", and the machine answered, "There is nothing to eat here." That sort of reply takes me back to the days when **The Hobbit** was king of adventures.

Alchemist, the company which put this paltry effort together, is trying to mimic ace adventure manufacturer Infocom, but is not having much success.

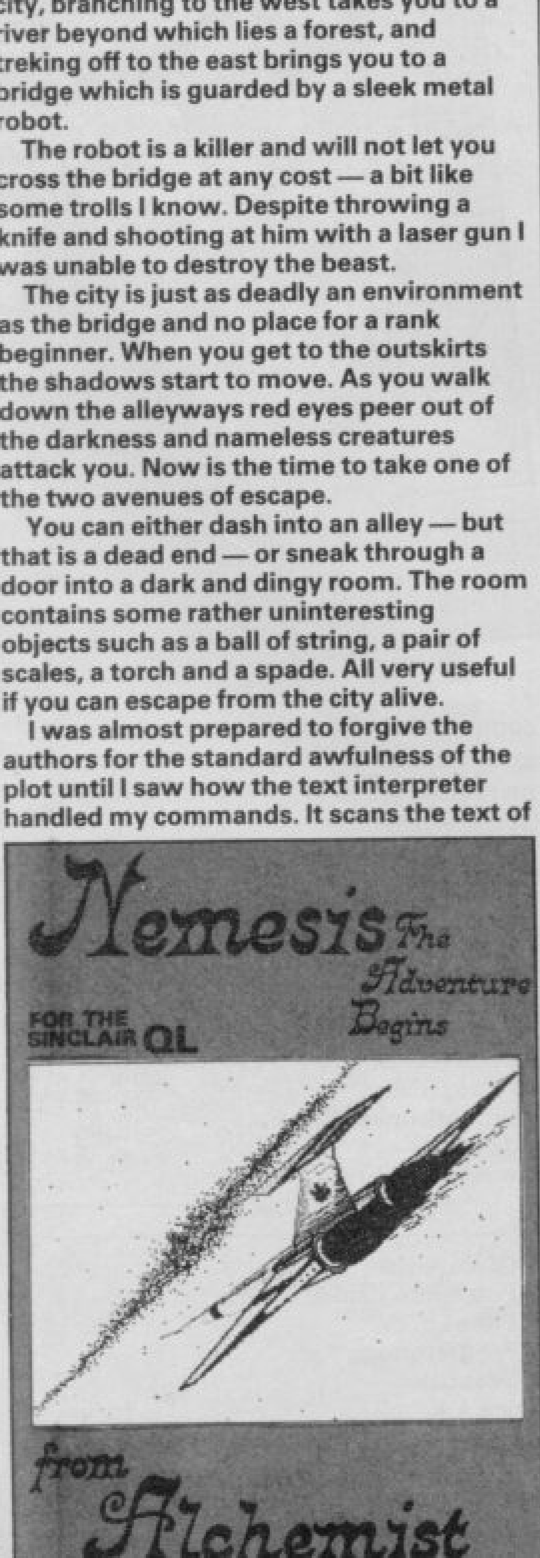
If it wants to produce games like **The Hitch Hikers' Guide to the Galaxy** from Infocom, or **The Pawn** from Magnetic Scrolls, it will have to attend to several major aspects of its games. The plots will need to be more original, and the puzzles easier at the start of a game, so that beginners will want to continue — there could even be a Help system available.

Alchemist will also need to produce longer textual descriptions to convey atmosphere within a game. I found the text descriptions of locations too short, and the authors should learn the difference between commas and apostrophes when putting text on the screen.

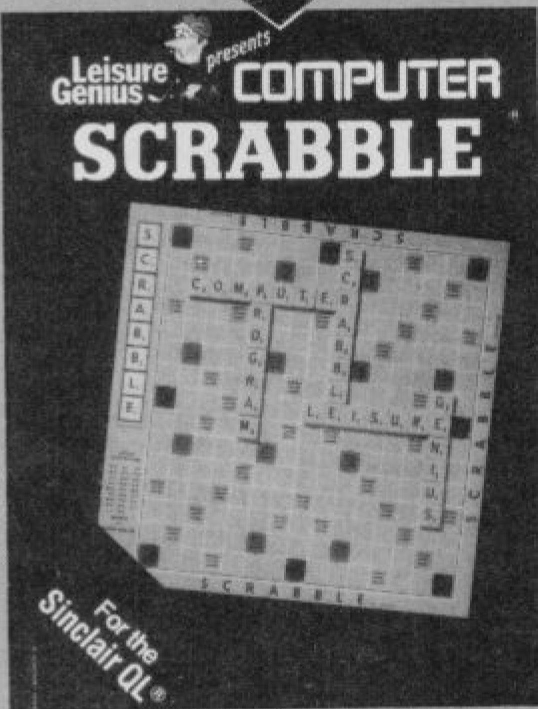
Nemesis is a product with unrealised potential. It could have been as good as **The Pawn** if the authors had taken more care over the presentation.

I do believe, however, that Alchemist is a company to watch. Its first product is weak, but at least it has had the guts to plan and execute a fairly complex game. *John Gilbert*

Publisher Alchemist, 5 Forster Street, Gainsborough, Lincolnshire DN 21 2LL
Programmers Paul Brittain and John Lovett
Price £13.95
★★★



SINCLAIR USER CLASSIC



QL Scrabble

SCRABBLE is one of those games computers ought to play really well. The basic requirements are a large vocabulary, and the power to search all the permutations quickly in order to decide on the best one.

The reason it hasn't appeared in many different versions on computers is probably that J W Spear, which holds the copyright, is zealous in protecting its classic game. The first **Scrabble** program was licensed to the Spectrum, and programmed by Psion. It remains one of the finest Spectrum games of all time.

QL Scrabble is quite a different program, by Leisure Genius. You might be forgiven for thinking it was just a conversion, but that's only because two official versions of a well-known game are bound to look much alike.

The official *Scrabble* reference book is *Chambers 20th Century Dictionary*, and **QL Scrabble** knows over 20,000 words from that, including lots of weird two and three letter words which are only ever found on *Scrabble* boards. And how about things like gadi or glia? I reckon there are some words whose definitions should always remain a total mystery.

You can play with up to four players, any or all of which can be taken over by the computer. When entering a computer player, you can also set its skill level from one to eight. From level five onwards the computer will run through all the two, three and four letter words in the dictionary — when it has a duff hand, that can take some time.

Fortunately, you can cut down on the time taken by playing against the clock. You can set a maximum time for each move ranging from ten seconds to ten minutes — tournament time is two minutes. The sound effects can be turned on and off as you please. Lightning **Scrabble** is a thoroughly punitive business against three computer players, but lots of fun all the same.

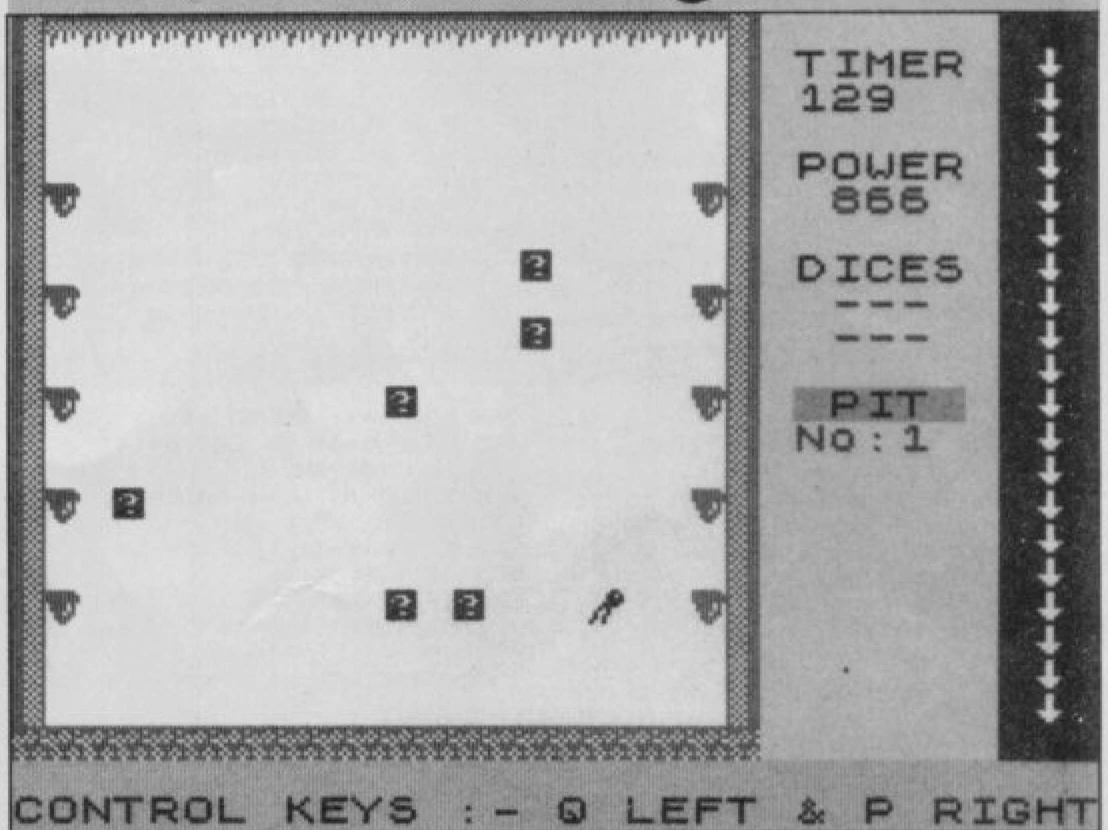
Options are all in this sort of game, and other choices include watching the computer suss out its best move, looking at all the players' racks of letters, and calling up tables of the number of letters and their values. You can also ask the computer for a hint, but that does take rather a long time, and there is no guarantee that the hint will be the best choice available.

QL Scrabble is an excellent game, perfectly suited to the capabilities of the machine, and with enough options to tailor the game to your own demands and abilities. I take on trust Leisure Genius' claim to have written a completely different program from the Psion original, and given that have no hesitation in awarding it a Classic.

It is reasonably priced, well-presented, has Load and Save facilities, and should give *Scrabble* fans endless enjoyment — as well as sharpening the wits of anybody who dares to take on the all-powerful QL at a game it plays with considerable brilliance. *Chris Bourne*

Publisher Leisure Genius
Programmers Leisure Genius
Price £14.95
★★★★★

FLEAPIT



YOU PLAY Freddy the Flea, and you're stuck down the pit. Ten pits deep in fact, and the only way out is to collect the six dice on each screen. To jump, you must hold down the jump key until you have amassed the right power for the jump — and remember, you can only collect a dice by falling on it from above. David Fryett from south London wrote the game, which runs on any Spectrum.

The program uses our special abbreviations for graphics characters, so please read the instructions before typing in the listing.

```
   1 REM FREDIE
   3 BORDER 5: INK 1: PAPER 7
   4 BRIGHT 1: CLS : PRINT AT 20
,10; PAPER 5; INK 1; FLASH 1;"Pl
ease Wait.": GO SUB 200
   5 PRINT AT 8,24; INK 2;"---";
AT 9,24;"---";AT 0,7; PAPER 7; I
NK 1;"HHHHHHHH";AT 12,23; INK 2;
 PAPER 6;"No:";sc;AT 5,24; INK 2
;st
   6 RESTORE 999+sc: FOR n=1 TO
10: READ a,b
   7 PRINT AT a,b; PAPER 7; INK
7; BRIGHT 1;"P": NEXT n
   8 FOR f=128 TO 122 STEP -1
   9 POKE 23296,f
  10 POKE 23297,f-1
  11 LET o=USR 64469
  12 FOR g=130 TO 140: POKE 6449
2,g: LET o=USR 64491
  13 NEXT g: NEXT f: GO TO 45
  59 FOR f=0 TO 5
  60 LET k=2+RND*18
  61 LET L=3+RND*15
  62 IF SCREEN$ (L,k)="" THEN  G
O TO 60
  63 IF SCREEN$ (L+1,k)="" THEN
 GO TO 60
  64 IF SCREEN$ (L-1,k)="" THEN
 GO TO 60
  65 POKE 64492,150
  66 LET o=USR 64491
  67 PRINT AT L,k; BRIGHT 1; INK
 2; PAPER 7;"S": NEXT f
  71 PRINT AT y,x; INK 0; PAPER
7;"Q";AT 2,23; PAPER 6;"(6*sp)"
  88 IF st<1 THEN  LET st=0: PRI
NT AT 5,24;st;"(3*sp)": GO TO 98
2
  89 PRINT AT 5,24; INK 2;st;"(s
p)"
 100 POKE 64492,255
 101 LET o=USR 64491
 102 IF INKEY$="p" THEN  LET j1=
850: GO TO 750
 103 IF INKEY$="q" THEN  LET j1=
800: GO TO 750
 104 GO SUB 998: GO TO 100
 200 BEEP .01/10,40
 230 RESTORE 600
 240 FOR a=USR "a" TO USR "u"+7
 250 READ b: POKE a,b: NEXT a
 260 RESTORE 740
 270 FOR a=64469 TO 64490
 280 READ b: POKE a,b: NEXT a
 290 RESTORE 730
 300 FOR a=64491 TO 64499
 310 READ b: POKE a,b: NEXT a
 311 LET x=11: LET y=20
 313 LET s=160: LET e=0
 314 LET jp=490: LET jr=0
 315 LET t=0: LET h=8
 316 LET sc=1: LET b$="Caverns"
 340 LET m=152: LET st=999
 341 LET z$="RQRQRQRQRQR"
 348 LET a$=". . . . . . . . . .
 . . . . . . .INSTRUCTIONS You m
ust help fredie make his escape
through the ten pits deep below
the earths surface. Each pit has
 to be decoded by collecting the
 six ramdomly placed dice. There
 will then be an opening in the
roof of the pit jump through it
to the next. When all the pits a
re decoded you will be given a t
ime. This is your target time fo
r the next game. Remember each t
ime fredie hits his head he will
 be dazed for 10 light seconds +
 30 units taken from his power.
Each time you enter a new pit yo
u will be given less power than
the last. IMPORTANT To collect a
 dice you must drop down onto it
. -GOOD LUCK- . . . . . . . . .
. . . . . . ."
 349 GO SUB 372: CLS
 350 FOR f=0 TO 21
 351 PRINT AT 0,f-1; INK 1; PAPE
R 7;"H";AT 21,f;"I";AT f-1,0;"G"
;AT f-1,21;"F"
 355 PRINT AT f,22; PAPER 3; INK
 6;"(7*ig8,3*sp)": NEXT f
 356 FOR f=1 TO 20: PRINT AT f,3
0; PAPER 3; INK 7;"E": NEXT f
 357 PRINT #1; INK 0;"CONTROL KE
YS :- Q LEFT & P RIGHT": INK 0
 358 RESTORE 363
 361 PLOT 237,2: DRAW 13,0: DRAW
0,170: DRAW -13,0: DRAW 0,-170
```

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Graphic Instructions

THERE ARE three types of abbreviation to watch out for in our program listings this month. As always (sp) means 'type one space', so (32*sp) would mean 'type 32 spaces'. Don't enter the brackets in such cases, or commas where they separate two graphics abbreviations.

If you get an underlined capital letter, enter that letter in graphics mode. It will not appear on the screen with an underline; that's just our way of distinguishing it from an ordinary capital letter.

Finally, (ig8) refers to the inverse of the graphics symbol on key 8. You obtain it by going into graphics mode and then pressing 8 while holding down Caps Shift. This should result in a solid black square.

Goofo Corner

The saga of **The Tripods** blunder in the February issue lingers on. Last month we gave out the missing line, which had to be inserted at the bottom of the second column on page 116, after the first four lines of 5030. It turns out that the line was not exactly missing, but rather displaced — it is in fact the sixth line of statement 5060. That should be removed completely and re-positioned in statement 5030 as indicated above. A thousand apologies.

The good news is that **Mission 12** and **Dungeon Danny** in the March issue do actually work by some miracle of good fortune. Sometimes we get it right . . .

FLEAPIT

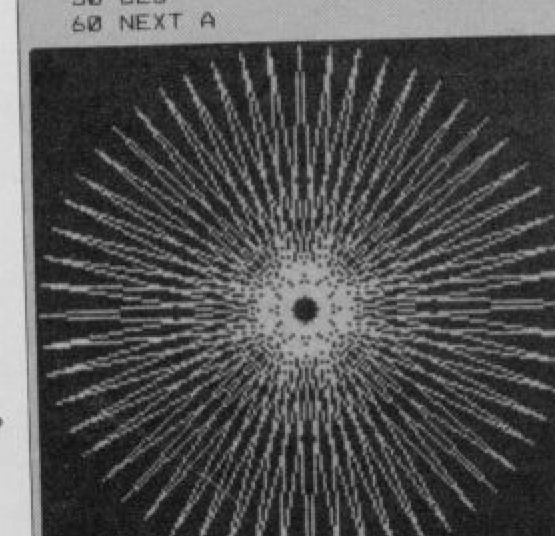
83 ◄

```
 362 PAPER 6: PRINT AT 1,23;"TIM
ER";AT 2,23;"00000";AT 4,23;"POW
ER";AT 7,23;"DICES";AT 11,23; PA
PER 4; INK 0;" PIT "
 370 RETURN
 371 BEEP .01,10
 372 PRINT AT 20,10;"(12*sp)": P
RINT #1; INK 0;"Hit Any Key To P
lay.": BEEP .1,60
 373 LET x3=1+INT (RND*29): LET
y3=21: LET p5=145: LET y4=-1: LE
T x4=1: FOR a=0 TO LEN a$-32
 374 LET x3=x3+x4: LET y3=y3+y4:
 PRINT AT y3,x3; OVER 1; INK 3;C
HR$ p5: PRINT  PAPER 7; INK 2;AT
 21,0;a$(a+1 TO a+32)
 375 BEEP .01/2,RND*59: PRINT AT
 y3,x3; OVER 1; INK 3;CHR$ p5
 376 IF x3>30 THEN  LET x4=-1: L
ET p5=147
 377 IF x3<1 THEN  LET x4=1: LET
 p5=145
 378 IF y3<1 THEN  LET y4=1
 379 IF y3>20 THEN  LET y4=-1
 389 IF INKEY$<>"" THEN  RETURN
 390 NEXT a: LET a=0: GO TO 374
 391 FOR f=0 TO 300: NEXT f: GO
SUB 980
 392 PRINT AT 2,2;"All Pits Deco
ded";AT 3,2;"in ";t;AT 4,2;"Ligh
t Seconds";AT 7,2; PAPER 0; INK
7;"WELL DONE";AT 9,2; PAPER 3; I
NK 0;"Now Try To Beat it"
 393 GO TO 945
 400 BEEP .01,50: LET m=m+1
 401 PRINT AT h,24+e; INK 1;CHR$
m
 402 PRINT AT y+1,x; INK 7;"(ig8
)9ig"
 403 LET e=e+1: LET jr=jr+1
 404 IF e=3 THEN  LET e=0: LET h
=9
 405 IF jr=6 THEN  PRINT AT 0,7;
 INK 1; PAPER 7;"U(6*sp)T": LET
jp=450
 410 GO TO 901
 450 IF y<0 THEN  GO TO 950
 490 RETURN
 500 DATA 45,103,229,205,162,45
 510 DATA 225,111,229,14,8,225
 520 DATA 37,229,36,197,68,77
 530 DATA 205,170,34,193,71,175
 540 DATA 176,221,126,0,40,17
 550 DATA 235,38,0,111,62,8
 560 DATA 144,71,41,16,253,235
 570 DATA 126,170,119,35,123,174
 580 DATA 119,221,35,13,32,213
 590 DATA 225,225,34,101,92,201
 600 DATA 0,0,16,40,120,240,192
 605 DATA 112,6,13,15,30,40,72
 610 DATA 80,144,0,0,8,20,30,15
 615 DATA 3,14,96,176,240,120,20
 620 DATA 18,10,9,24,24,24,24
 625 DATA 126,60,24,0,175,215
 630 DATA 175,215,175,215,175
 631 DATA 215
 635 DATA 235,245,235,245,235
 640 DATA 245,235,245,255,255
 645 DATA 170,85,170,106,72,64
 650 DATA 255,246,171,86,191,221
 655 DATA 170,221,254,254,254
 660 DATA 238,254,254,254,0,254
 665 DATA 190,254,254,254,250
 670 DATA 254,0,254,190,254,238
 675 DATA 254,250,254,0,254,186
 680 DATA 254,254,254,186,254
 685 DATA 0,254,186,254,238,254
 690 DATA 186,254,0,254,186,254
 695 DATA 186,254,186,254,0,254
 700 DATA 255,255,122,122,54,60
 705 DATA 24,0,0,0,56,84,254,186
 710 DATA 130,0,0,0,130,186,254
 715 DATA 84,56,254,198,178,230
 720 DATA 254,230,254,0,255,127
 725 DATA 63,31,15,7,3,1
 727 DATA 255,254,252,248,240
 728 DATA 224,192,128
 730 DATA 33,20,0,17,20,0,195
 735 DATA 181,3
 740 DATA 33,0,88,1,0,3,237,91,0
 745 DATA 91,126,187,32,1,114,35
 749 DATA 11,120,177,32,245,201
 750 LET i=0
 751 IF j1=850 THEN  PRINT AT y,
x; PAPER 7; INK 0;"A"
 752 IF j1=800 THEN  PRINT AT y,
x; PAPER 7; INK 0;"C"
 753 LET i=i+1
 754 IF i>20 THEN  LET i=1
 755 PRINT AT i,30; OVER 1; INK
3; PAPER 0;"(ig8)"
 756 FOR g=1 TO 2: POKE 64492,80
: LET o=USR 64491: NEXT g
 758 PRINT AT i,30; OVER 1; INK
7; PAPER 3;"(ig8)"
 759 IF INKEY$<>"" THEN  GO TO 7
53
 760 LET v=i: GO TO j1
 801 LET st=st-i: LET p=147
 802 FOR f=1 TO v
 803 PRINT AT y,x; PAPER 7; INK
0;CHR$ 128
 806 LET x=x-1: LET y=y-1
 807 GO SUB jp
 813 IF SCREEN$ (y,x)="" THEN  L
ET p=147: LET x=x+1: LET y=y+1:
GO TO 900
 814 PRINT AT y,x; PAPER 7; INK
0;CHR$ 147
 815 FOR d=1 TO 2: POKE 64492,f*
10: LET o=USR 64491: NEXT d
 819 NEXT f: GO TO 901
 851 LET st=st-i: LET p=145
 854 FOR f=1 TO v
 855 PRINT AT y,x; PAPER 7; INK
0;CHR$ 128
 859 LET x=x+1: LET y=y-1
 860 GO SUB jp
 865 IF SCREEN$ (y,x)="" THEN  L
ET p=145: LET x=x-1: LET y=y+1:
GO TO 900
 868 PRINT AT y,x; PAPER 7; INK
0;CHR$ 145
 869 FOR d=1 TO 2: POKE 64492,f*
10: LET o=USR 64491: NEXT d
 899 NEXT f: GO TO 901
 900 LET st=st-30: FOR f=1 TO 10
: PRINT AT y,x; PAPER 7; INK 0;
OVER 1;z$(f): LET t=t+1: PRINT A
T 2,23;t: BEEP .01,f+40: PRINT A
T y,x; PAPER 7; INK 7; OVER 1;z$
(f): NEXT f
 901 FOR f=1 TO 20
 902 IF y=20 THEN  GO TO 911
 903 IF SCREEN$ (y+1,x)="" THEN
 GO TO 911
 904 PRINT AT y,x; INK 0; PAPER
7;CHR$ p
 905 FOR g=1 TO 2: POKE 64492,f+
200: LET o=USR 64491: NEXT g
 907 PRINT AT y,x; INK 0; PAPER
7;CHR$ 128
 910 LET y=y+1: NEXT f
 911 PRINT AT y,x; PAPER 7; INK
0;"Q"
 913 IF ATTR (y+1,x)=122 THEN  G
O TO 400
 914 GO TO 88
 945 PRINT AT 16,2; INK 6; PAPER
 2;"Do You Want      ";AT 17,2;"A
nother Game y/n": BEEP .9,10
 946 IF INKEY$="n" THEN  PRINT
PAPER 0; INK 7;AT 19,2;"Thanks F
or Playing": STOP
 947 IF INKEY$<>"y" THEN  GO TO
946
 949 GO TO 1
 950 BEEP .01,20
 951 GO SUB 980
 952 PRINT AT 2,2;"Pit ";sc;" Ha
s";AT 3,2;"Been Decoded."
 953 PRINT AT 4,2;"Well Done."
 954 IF sc=10 THEN  GO TO 391
 955 PRINT AT 18,2;"Hit Any Key
To";AT 19,2;"Start Next Pit."
 956 IF INKEY$="" THEN  GO TO 95
6
 957 GO SUB 980
 958 LET sc=sc+1: LET st=999-sc*
50: LET h=8: LET i=0: LET y=20:
LET x=11: LET s=160: LET m=152
 960 LET jr=0: LET e=0: GO TO 5
 980 FOR f=1 TO 20: PRINT AT f,1
; INK 7;"(20*ig8)"
 981 NEXT f: RETURN
 982 PRINT AT y,x; PAPER 7; INK
0;"R": BEEP 1,20: GO SUB 980
 983 IF sc=2 THEN  LET b$="Caver
n"
 984 PRINT AT 5,2;"You Decoded "
;sc-1;AT 6,2;b$;" In ";t;AT 7,2;
"Light Seconds."
 985 FOR f=1 TO 255 STEP 2
 986 POKE 64492,f: BORDER 2
 987 LET o=USR 64491: NEXT f
 995 GO TO 945
 998 LET t=t+1: PRINT AT 2,23;t
 999 RETURN
1000 DATA 5,1,8,1,11,1,14,1,5,20
,8,20,11,20,14,20,17,20,17,1
1001 DATA 5,10,5,8,5,6,7,6,9,6,9
,8,9,10,11,6,13,6,15,6
1002 DATA 20,9,4,13,6,11,8,9,10,
11,12,13,14,11,16,9,18,11,20,13
1003 DATA 2,1,2,3,4,1,4,3,6,1,6,
3,8,1,8,3,10,1,10,3
1004 DATA 10,5,10,4,10,3,10,2,10
,1,10,6,10,7,8,10,6,10,4,10
1005 DATA 5,11,5,12,6,13,7,13,8,
12,8,11,7,10,6,10,5,11,12,1
1006 DATA 11,11,10,12,9,13,8,14,
7,15,6,17,5,18,4,19,3,20,7,16
1007 DATA 7,10,6,11,7,12,9,10,9,
10,10,11,8,9,8,13,9,12,10,1
1008 DATA 11,6,11,8,11,14,11,16,
9,20,9,11,7,11,13,11,15,11,9,1
1009 DATA 4,5,4,6,5,6,4,15,5,15,
4,16,15,1,15,2,15,19,15,20
```

PATTERNS

HERE'S A TINY program which runs on any Spectrum. It was written by James Spencer of Coventry and all it does is draw patterns on the screen. What is surprising is the sheer variety of pattern you can get.

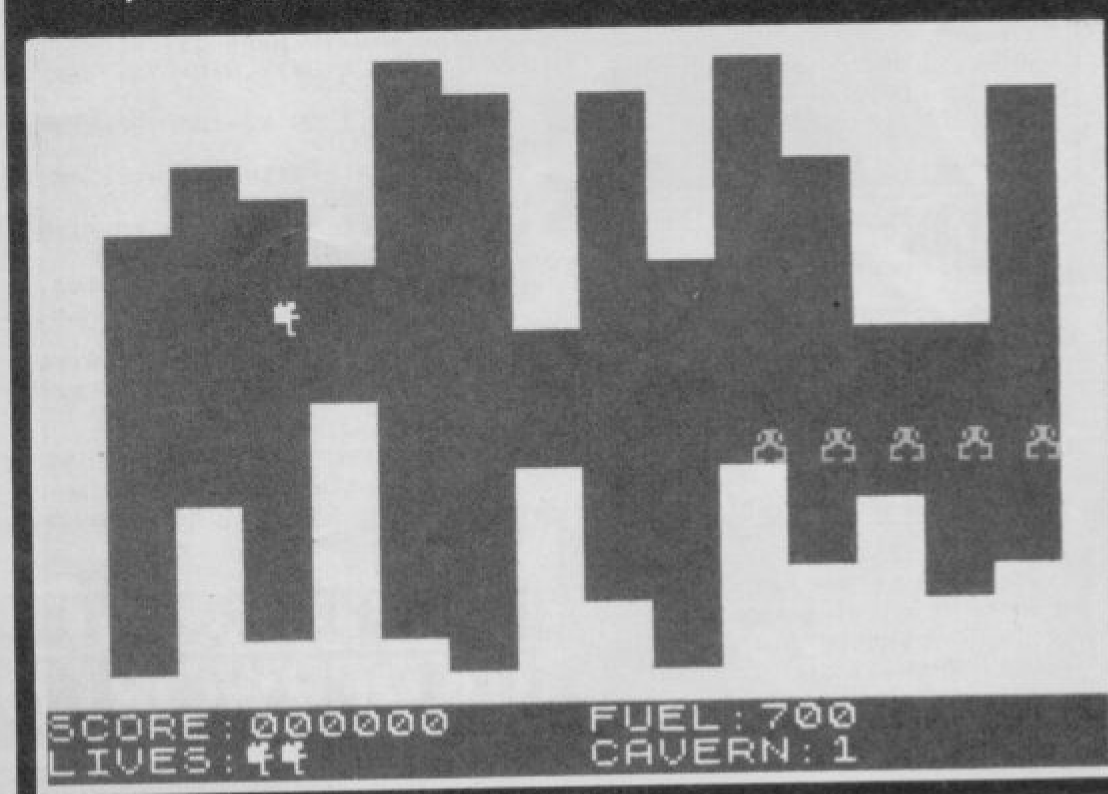
```
   1 REM Pattern Designer
   2 REM Try changing numbers in
 line 20
  10 PAPER 0: INK 4: BORDER 0: C
LS
  20 FOR A=51 TO 10000 STEP 100
  30 PLOT 65,30
  40 DRAW 120,120,PI*A
  50 CLS
  60 NEXT A
```



ESCAPE FROM THE UNDERWORLD

***BLAST YOUR WAY** out of the caves of Andromeda in **Escape from the Underworld** by J Dury of Bristol. The program runs on the 48K Spectrum or Spectrum Plus and sets you the task of destroying five aliens in each cave before your energy runs out.*

The program uses our special abbreviations for graphics characters, so please read the instructions before typing in the listing.



Lines 5 to 100 Line 5 is a standard Poke to set the machine in CAPS LOCK mode, and line 20 sets permanent colours in the same way as colour statements. Dury is an economical programmer as we shall see later, but you could do this sort of thing with ordinary statements. Array **A()** is set to contain five elements which will correspond to the five aliens. The rest of the lines read in the data for the user defined graphics characters. Variable **H** holds the hi-score.

```
   5 POKE 23658,8
  10 DIM A(5)
  20 POKE 23693,7: OVER 0: BORDE
R 0: CLS
  40 FOR N=USR "A" TO USR "H"+7:
 READ A: POKE N,A: NEXT N
  50 DATA 26,31,15,63,15,8,8,24
  60 DATA 26,31,15,63,15,26,21,5
0
  65 DATA 88,248,240,252,240,16,
16,24
  70 DATA 88,248,240,252,240,88,
168,76
  75 DATA 60,90,90,60,231,129,12
9,231
  80 DATA 0,0,16,209,255,120,248
,120
  85 DATA 30,31,30,255,139,8,0,0
  90 DATA 24,8,8,15,63,15,31,26
  95 LET H=1000
 100 REM VARIABLES
```

Lines 100 to 1010 The basic variables are now set up. **CAV** is the number of the current cavern. **L** is the number of lives you have left, **SC** is the score, **SL** is a score modifier used to decide whether you deserve a bonus life and **UP** is used to determine whether you are flying up or not. Score, fuel, lives and other details are printed at the bottom of the screen, and the program then goes to the routine at 5000 to set up a new cavern.

```
 105 LET CAV=1: LET L=3: LET SC=
0: LET SL=0: LET UP=0
 110 PRINT AT 10,5; FLASH 1;" PR
ESS A KEY TO PLAY ": PAUSE 0
 120 PRINT AT 20,0;"SCORE:000000
";TAB 16;"FUEL:1000";TAB 0;"LIVE
S:CCC";TAB 16;"CAVERN:1"
1000 REM SET UP GAME
```

Lines 1015 to 1220 Some more variables are set up. **NA** is the number of aliens left, and **FL** is your fuel level. **X** and **Y** are your starting positions, **XN YN** and **DR** are used to determine degree of thrust and direction of movement. Lines 1050 to 1070 position the five aliens on the screen. Line 1060 looks at the colour of the square under examination and if it is not red, that is, if the ATTR function is not 2, the alien is put there. **A(N)** holds the vertical co-ordinate of the alien which is then printed. **N** is also used to determine the horizontal position of the alien initially. 1110 copies the **X** and **Y** values into **X1** and **Y1** for future use.

```
1010 GO SUB 5000
1015 LET NA=5: LET FL=10
1020 LET X=10: LET Y=2
1040 LET XN=1: LET YN=0: LET DR=
1
1050 FOR N=1 TO 5
1060 FOR M=19 TO 9 STEP -1: IF A
TTR (M,19+N*2)=2 THEN  NEXT M
1070 LET A(N)=M: PRINT AT M,29-(
5-N)*2; INK 5;"E": NEXT N
1110 LET X1=X: LET Y1=Y
1190 PRINT AT 21,5+L;"(sp)"
1210 PRINT AT 10,2; INK 6;"C";AT
 0,0;: FOR N=1 TO 19: PRINT  INK
 2;"(2*ig8)": BEEP .0005,N+40: N
EXT N
1220 POKE 23672,0: POKE 23673,0
2000 REM MAIN LOOP
2010 LET BIT=0: IF IN 64510<192
THEN  LET BIT=64
2020 IF NA>0 THEN  FOR C=1 TO NA
2025 LET UP=0: IF IN 64510=254-B
IT THEN  LET UP=1: IF FL THEN  L
ET XN=XN-1
2030 LET YN=YN+(IN 57342=254-BIT
)-(IN 57342=253-BIT)
```

Lines 2000 to 2030 Dury starts to get going in the main loop. Instead of using boring old INKEY$ for the input, he is using the IN instruction which scans the keyboard via the signals sent out of the port at the back. This is faster then INKEY$ but difficult to use. **BIT** is used as a comparison with the number sent out by the keyboard so the key can be checked. A value of 254 is given out if no keys are pressed in the appropriate row, so **BIT** is subtracted from that to find the actual key pressed.

At line 2020 the IF statement makes the whole of the routine to 2220 into a loop to deal with the aliens — if **NA** is bigger than **0**. If it isn't there are no aliens, and to avoid trouble when the program reaches NEXT C that case will be looked after within the loop. This is Basic programming at its most devious and only recommended to those with strong nerves. The net result of all those tortuous IN statements is to decrease horizontal thrust if you move up and down, or remain stationary.

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Lines 2035 to 2080 Line 2035 adds 0.5 to the horizontal thrust if the way is clear, so you tend to keep moving towards the aliens. Lines 2040 and 2045 work out all the thrust factors and get **X1** and **Y1** set to the correct values for the new position of your man. At 2050 the horizontal thrust is set to zero if you have bumped into something, and **X1** and **Y1** revert to their original values since you aren't going to move at all. At 2070 a space is printed over the old position and UDG is printed in the new position. Which UDG? **DR** and **UP** and **FL** — the fuel, remember — are used to decide which version of the man gets printed.

The economical Dury has run all this together, to save speed, but you could do it with a bundle of IF . . . THEN PRINT "???" type statements. At 2075 the program goes to the routine at 6000 if you have got right through the cavern. Finally, at 2080 the new co-ordinates become the old ones, **X** and **Y**, in readiness for another waltz round the loop.

```
2035 IF ATTR (X+1,Y)=7 THEN  LET
 XN=XN+.5
2040 LET Y1=Y+YN: LET X1=X+SGN X
N
2045 IF YN THEN  LET DR=SGN YN:
LET YN=Ø
2050 IF ATTR (X1,Y1)<7 THEN  LET
 XN=Ø: LET X1=X: LET Y1=Y
2070 PRINT AT X,Y;"(sp)";AT X1,Y
1; INK 6;CHR$ (145+DR+UP*(FL>Ø))
2075 IF Y1=31 THEN  GO SUB 6ØØØ
2080 LET X=X1: LET Y=Y1
```

Lines 2085 to 2230 Line 2085 invokes the fire routine at line 4000 if the appropriate keys are pressed. Direction of fire is also worked out and stored in **PX** and **PY** relative to your current position. 2090 ignores the alien move sequence if there are no aliens. 2095 to 2130 covers the aliens. They will move more or less in your direction and fire if they are level with you at line 2130. Line 2210 checks to see if you are out of fuel, and line 2230 sends you back to the beginning of the main loop if everything has been successfully negotiated.

```
2Ø85 IF IN 65278=253-BIT THEN  L
ET TX=(IN 65Ø22=254-BIT)-UP: LET
 TY=DR: LET PX=X+TX: LET PY=Y+TY
: GO SUB 4ØØØ
2Ø9Ø IF NA<1 THEN  GO TO 22ØØ
2Ø95 IF A(C)=Ø THEN  LET C=C-(C=
5)*5+1: GO TO 2Ø95
21ØØ LET XD=SGN (X-A(C))
21Ø5 LET AY=29-(5-C)*2
211Ø LET AX=A(C)+XD
2115 IF XD=Ø OR ATTR (AX,AY)<>7
THEN  GO TO 213Ø
212Ø PRINT AT A(C),AY;"(sp)";AT
AX,AY; INK 5;"E"
2125 LET A(C)=AX
213Ø IF A(C)=X AND ABS (Y-AY)<11
 THEN  LET TX=Ø: LET TY=SGN (Y-A
Y): LET PX=A(C)+TX: LET PY=AY+TY
: GO SUB 4ØØØ
221Ø IF FL>Ø THEN  LET FL=1Ø-PEE
K 23673: PRINT AT 2Ø,21;FL;"ØØ(s
p)": IF FL<1 THEN  PRINT #Ø;TAB
9; FLASH 1;"OUT OF FUEL"
222Ø NEXT C: IF NA=Ø THEN  FOR N
=2 TO 17: PRINT AT N,3Ø;"(2*sp)"
: BEEP .ØØØ5,6Ø-N: NEXT N: LET N
A=-1
223Ø GO TO 2ØØØ
```

Lines 4000 to 4090 The firing routine first checks to see if the next space in the direction of fire is empty. If so, then at 4032 to 4037 **PX** and **PY** are set to the co-ordinates of the furthest point along the line of fire which is not blocked by an alien or cavern wall. At 4040 the colour of that end square — the target — is recorded in **ATR**. If **ATR** is **6** the aliens have been firing at you and routine 5100 is called in for your death. The line at 4080 handles the demolition of a stalactite.

```
4Ø3Ø IF ATTR (PX,PY)<>7 THEN  GO
 SUB 418Ø: GO TO 4Ø4Ø
4Ø32 LET PPX=PY*8+4: LET PPY=(21
-PX)*8+4
4Ø33 FOR N=1 TO 1Ø: LET PX=PX+TX
: LET PY=PY+TY: IF ATTR (PX,PY)=
7 THEN  NEXT N: LET X1=1ØØ
4Ø34 GO SUB 418Ø
4Ø37 INK 8: OVER 1: PLOT PPX,PPY
: DRAW N*8*TY,N*8*-TX: PLOT PPX,
PPY: DRAW N*8*TY,N*8*-TX: INK 7:
 OVER Ø
4Ø39 IF N<1 OR X1=1ØØ THEN  GO T
O 4Ø9Ø
4Ø4Ø LET ATR=ATTR (PX,PY): IF AT
R=5 THEN  GO TO 415Ø
4Ø42 IF ATR=6 THEN  GO TO 51ØØ
4Ø45 PRINT AT PX,PY;"(sp)"
4Ø5Ø IF PX>9 THEN  GO TO 41ØØ
4Ø55 IF ATTR (PX+1,PY)=7 THEN  G
O TO 4Ø9Ø
4Ø6Ø FOR N=PX+1 TO 11: IF ATTR (
N,PY)=2 AND N>1 THEN  NEXT N: GO
 TO 4Ø9Ø
4Ø7Ø LET M=PX+1
4Ø8Ø IF ATTR (N,PY)=7 THEN  PRIN
T AT M,PY;"(sp)";AT N,PY; INK 2;
"(ig8)": LET M=M+1: LET N=N+1: G
O TO 4Ø8Ø
4Ø9Ø RETURN
```

ESCAPE FROM THE UNDERWORLD

Lines 4100 to 4192 Lines 4100 to 4120 check for the case where a piece of cavern is blasted, but a stalactite does not fall down. Lines 4150 to 4192 complete the firing section with the death of an alien. In 4165 the number of aliens is decreased, and the alien array from which the alien positions are plotted changes the appropriate element to zero. Line 4166 gives a little Beep and increases your score. The routine at 4182 to 4192 resets co-ordinates.

```
41ØØ FOR N=PX-1 TO 1 STEP -1: IF
 ATTR (N,PY)=2 THEN  NEXT N
412Ø PRINT AT PX,PY; INK 2;"(ig8
)"; INK 7;AT N+1,PY;"(sp)": GO T
O 4Ø9Ø
415Ø PRINT AT PX,PY;"(sp)"
416Ø LET N=(PY-19)/2
4165 LET NA=NA-1: LET A(N)=Ø
4166 BEEP .ØØ4,2Ø+5*N: LET SC=SC
+15Ø+5Ø*N: GO SUB 71ØØ
417Ø RETURN
4182 IF PX>18 THEN  LET N=N-PX+1
8: LET PX=18
4184 IF PX<2 THEN  LET N=N-2+PX:
 LET PX=2
4186 IF PY>29 THEN  LET N=N-PY+2
9: LET PY=29
4188 IF PY<3 THEN  LET N=N-3+PY:
 LET PY=3
4192 RETURN
```

Lines 5000 to 5030 The lines draw a cavern at random. Line 5020 is the important one — two solid squares in this case red, are printed all the way along the cavern up to nine deep, top and bottom, depending on the random number chosen.

```
5Ø1Ø PRINT AT 2Ø,21;"1ØØØ";AT 21
,23;CAV: INPUT "": PRINT AT Ø,Ø;
: FOR N=Ø TO 19: PRINT AT N,Ø;TA
B 31;"(sp)": NEXT N
5Ø15 PRINT AT Ø,Ø; INK 2;"(2*ig8
)";AT 19,Ø;"(2*ig8)"
5Ø2Ø FOR N=2 TO 29 STEP 2: FOR M
=Ø TO INT (RND*9): PRINT AT M,N;
 INK 2;"(2*ig8)": NEXT M: FOR M=
19-INT (RND*9) TO 19: PRINT AT M
,N; INK 2;"(2*ig8)": NEXT M: NEX
T N
5Ø25 FOR N=Ø TO 19: PRINT AT N,3
Ø; INK 2;"(2*ig8)": NEXT N
5Ø3Ø RETURN
```

Lines 5100 to 5190 Here is the death routine. **L** is decreased by one life, an appropriate graphic is chosen from the stock held in **A$**, and your position is worked out. You are eliminated, a tune is played, and if you have any lives left then line 5150 sends you back to the main routine again.

```
51Ø5 LET L=L-1  '
511Ø LET A$="FCGH"
513Ø FOR M=1 TO 5 STEP .25: IF A
TTR (X+1,Y)=7 THEN  LET X=X+1
514Ø LET TU=(M-INT M)*4+1: PRINT
 AT X-1,Y;"(sp)";AT X,Y; INK 6;A
$(TU): BEEP .ØØ5,6Ø-TU: NEXT M
5145 PAUSE 1: PAUSE 15: BEEP .2,
9: PAUSE 3: BEEP .1,4: BEEP .1,4
: BEEP .1,4: BEEP .4,5: BEEP .2,
4: PAUSE 2Ø: BEEP .3,8: PAUSE 3:
 BEEP .3,9
515Ø IF L THEN  GO TO 1ØØØ
516Ø INPUT "": PRINT  Ø;TAB 1Ø;"
GAME OVER": PAUSE 3Ø
517Ø IF SC>H THEN  LET H=SC
518Ø FLASH (SC=H): PRINT AT 21,Ø
;" HIGH:ØØØØØØ";AT 21,12-LEN STR
$ H;H: FLASH Ø: IF SC=H THEN  GO
 SUB 7Ø5Ø
519Ø GO TO 1ØØ
```

Lines 6000 to 6060 This routine is called when you complete a cavern. A bonus score is given and a check made for extra lives at line 6040.

```
6ØØ5 PRINT AT X1,Y1;"(sp)"
6Ø1Ø PRINT AT 8,6; FLASH 1;" CAV
ERN ";CAV;" COMPLETED "
6Ø3Ø GO SUB 7Ø5Ø
6Ø4Ø LET SC=SC+FL*1ØØ*CAV: PRINT
 AT 2Ø,21;"ØØØØ": GO SUB 71ØØ: L
ET CAV=CAV+1
6Ø6Ø PRINT AT 1Ø,9; FLASH 1;" PR
ESS A KEY ": PAUSE Ø: PAUSE Ø: G
O TO 1ØØØ
7Ø5Ø BEEP .1,Ø: BEEP .1,2: BEEP
.1,4: BEEP .2,7: BEEP .1,4: BEEP
 .6,7: RETURN
71ØØ PRINT AT 2Ø,12-LEN STR$ SC;
SC: IF SC-SL>=1ØØØØ THEN  LET L=
L+1: PRINT AT 21,4+L;"C": LET SL
=SL+1ØØØØ: BEEP .Ø1,1Ø
711Ø RETURN
```

Lines 7000 to 7110 Two routines here — the first plays a little tune to congratulate you and the second, at line 7100, tests for an extra life. You get this if you have scored 10000 points since your last extra life. **SL** is upgraded by 1000 points each time.

ADVERTISEMENT INDEX

The Last Word

THERE'S no getting away from it, **The Last Word**, from Saga Systems is different from any other word processor I've seen — and that includes Amstrad **Locoscript** and **Wordstar** on CP/M.

It has all the functions required of a word processor and includes commands which you may need when you've got to know the package better. You do not, however, have to know all the commands to write simply structured documents.

The main control keys are symbol shift and extended mode so the program is easiest to use on the Spectrum Plus, or 128, rather than the old 48K machine. Of course, the system will also work well with the Saga Systems keyboard — but then it would, wouldn't it?

The screen is split into the usual status bar sector — at the top — and the document window, which takes up most of the page. Text can be printed on the screen in a number of sizes ranging from 40 to 80 characters a line.

Margins can be set to cope with any paper width. If your printer copes with 100 characters a line, so will **The Last Word**. However, unlike other word processors with this facility, everything is displayed on scree. For instance, if you set the screen to 60 characters a line and your margins to 100 characters a line, then the left-over characters would be put on the next line of the screen window.

Tabulation positions are also simple to set but slightly inflexible as you can only set one width of margin. You could put a tab marker every eight characters along the screen width. You can clear all those tabs by entering 'one' as the specification, but you cannot set up odd tabs at varying distances along a line.

Once you've set the tabs and margins for your document you can type in the text. Unlike a typewriter, however, you do not have to worry about the end of a line. It will simply split the last word on the line in half or, if the word wrap is in operation, the word which would be split is taken onto the next line.

The four cursor arrow keys are used when editing text line-to-line or character-to-character. Using the extended mode and symbol shift, you can also move through a document word by word, or sentence — not line — by sentence.

Movement around the text file is made simpler with a Goto command using extended mode. That type of command is best used when you need to go to the end or beginning of a file and will do it quickly without panning through the remainder of the document.

Copy can be manipulated in blocks — paragraphs — or whole documents. Lines can be justified against the left, right or both margins, and even centred. If you make an error in layout, blocks of text or even the whole document can be reformatted so that more characters can be put on a page, lines can be made shorter by moving in the margins, and text can be centred.

Blocks of text can be copied from one area of the document to another. You can also delete paragraphs and find words or phrases in the text. The latter option looks at each group of characters, which it deems to recognise as a word, and that can cause problems. If you wanted to find every recurrence of the word 'Gilbert' then **The Last Word** would find it with no problems unless the word had a comma after it — Gilbert, — in which case it would not recognise it. To be fair, this is a fault shared by other word processors.

You will often want to know how many words are in your document. **The Last Word** not only gives the number of words but also the number of bytes used to store the text file. Files can be up to 24K long which allows you to put almost 25,000 characters in your documents. Words have an average length of six characters, so the program can hold roughly 4,000 words — enough for the most ardent writer.

The Last Word has a unique way of handling printer and file compatibility. You can exit to Basic and produce routines to drive the printer, transfer files from other machines or storage devices, and set up text within strings such as names and addresses, which can then be inserted in your documents. All those functions are called when the program reaches a special mark in the text.

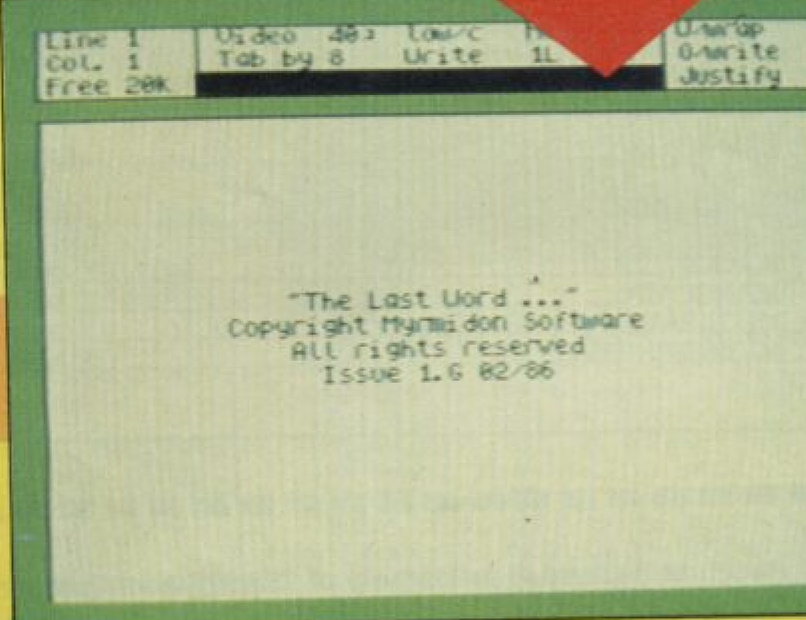
Print parameters, such as setting the type of text you require — bold, italic or double sized — can also be set up using those marks.

The markers can be set anywhere within a document and several of them can be run together. If you put two or three in a row you will notice a strange, but appealing attribute of the word processor. You can put hundreds of markers one after the other but they will take only one space in your document.

Once set you can see what effect the markers are meant to achieve by passing the cursor over the black marker blob and pressing the right cursor key. Each marker's job will be displayed in the status window, one at a time, as you page through them. When you've encountered all the markers you have set, the cursor will start to move down the line again.

You can dump your text to a wide variety of printers using Centronics and RS 232 interfaces. Setting up the program to cope with your particular printer interface will cause no problems. It includes an interactive menu on which is displayed all the control codes for interfaces. Just turn to the code appendix for your interface.

The Last Word is the friendliest word processor I have used. It has everything



The Last Word displays a file status window

The Writer

IF YOU despise the QL but are envious of the **Quill** word processor bundled with the machine, you can have the last laugh with your 128. QL owners can't use **The Writer** on their machines.

Softechnics has made its word processor one of the easiest to use but has made no concessions to features. It supports just about every action you would want to perform on a text document.

The Writer is supplied on cassette but it can be transferred to microdrive. If you're going to use it as a business too, microdrives or discs are a necessity. The drives reduce significantly the time taken for loading and saving text files, and when using the microdrive directory you can tell which files are available on a particular cartridge — a job which is almost impossible using the serial medium of cassette tape.

Once loaded the word processor goes automatically into insert mode. A status line at the top of the screen shows the optional microdrive number, the number of the page you are on, followed by the line and column positions of the cursor.

The main part of the screen contains the paper on which you write and the cursor blinks away at line zero, column zero. The page width is 63 characters but, if you own a printer which can print 80 or 100 characters per line, you can change the default and the screen will scroll across as you type.

The appeal of **The Writer** is mainly due to its drop down menus from which you can select most of the options available from the word processor.

you require with a host of extras — a remarkable programming feat given the memory available.

The program even includes a calculator and an alarm clock. The calculator manipulates numerical data within documents — such as lengthy formulae — and the alarm can be set to remind you when to save your files. The manufacturer recommends that you back up your work every half an hour — very sound advice too.

The author has spent two years writing the program. He had no experience of word processors, but merely an idea of what he would want a text manipulator to achieve. He has succeeded in surpassing the quality of all word processors on the Sinclair market, and many in the MS-DOS and CP/M markets.

Whether **The Last Word** is the last word in word processing, only time — and the other manufacturers who take it up — will tell. As for Saga, it intends to produce a 128K version and updates for the Spectrum. It has no plans to launch it on other machines so, you lucky Spectrum people, you are part of a growing minority which can enjoy the power of **The Last Word**.

John Gilbert

Publisher Saga Systems
Price £13.95 **Memory** 48K
Programmer Myrmidon Software
★★★★★

Tasword Three

SOFT 5 WARE

SINCE its launch in 1983, **Tasword Two** has been the acknowledged word processor for the Spectrum. Now, after three long years, and in the face of serious competition from **The Writer** and **The Last Word**, **Tasword Three** has been released.

Unlike its predecessor, **Tasword Three** is available only on microdrive, although a disc version — running on the Opus Discovery — is planned.

Any new version of an existing program must contain improvements and additions in either performance or ease of use. Tasman has made improvements in both. For a start, the manual is easy to understand and you can quickly get to any information you need.

Most Spectrum word processors are limited to a maximum of 32 columns across the screen — even **Tasword Two** offers only 64 columns. Most printers, however, can cope with 80 columns. The **Tasword Three** screen is a window over which you can scroll up to 128 character lines across the display. The only problem with this screen format is that you cannot see all of the text all of the time, but if you want to see how the text will look when printed there is no way around the problem.

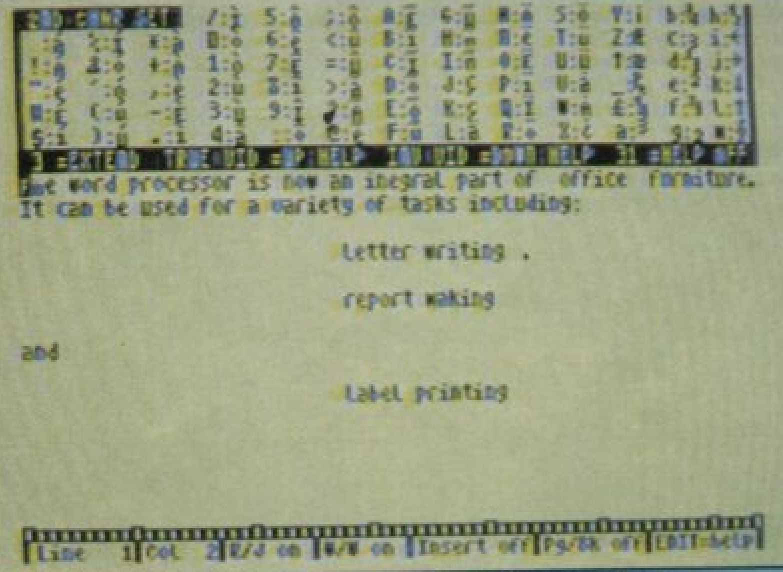
At the bottom of the screen a status line gives information on how the program is dealing with the text and how your text is being split into pages — called page breaks. The information, which you must set up for Tasword, is necessary because the printer will have to know when to ask for a new sheet of paper or where to put extra spaces in at the end of a page.

Further information is provided on two pull down Help pages, which include details of how to move the block cursor — which does all the writing — around the screen. Those Help pages are useful but I relied more heavily on the contents page of the instruction manual.

Many word processors will fail to meet your requirements, simply because the computer hardware — the keyboard — cannot cope with your typing style and speed. If you hold a character key down for too long you may several copies of that character up on the screen. Alternatively, if you don't hold it down for long enough the character may not be picked up at all.

Tasword Three, however, has an option which will change the amount of time the computer takes before it repeats a character. If you are a slow typist you may want to increase the interval before a repeat and if you are fast you will want to make the repeat faster.

► 92



Tasword Three displays text across a scrolling window

Selection is made using an arrow cursor and confirmed by pressing Enter. New commands can be given to **The Writer** in a few seconds while on other word processors finding the control keys may take up to half a minute.

Categories of sub-menu include: File, Edit, Text, Search, Format, Help.

The File menu allows you to manipulate external storage devices — cassette, microdrive and disc — change the name of a document, monitor the text as it is printed, change the storage medium and use mail-merge.

Five documents can be held in memory at the same time using the 128 RAM disc facility, so choosing a name for each using the File menu is important. If you do not set up names or values when required by **The Writer**, the program always puts its own default values into operation.

The Edit menu affects the way in which text is typed onto the screen and the way in which **The Writer** responds.

The Edit menu displays operations which can be performed on blocks of text. The block commands include Copy, Delete, and Write/Include. To Copy a block of text to another point of a document, mark the start and end points of the block with a graphics 'M' and invoke the command on the menu.

Delete is performed in a similar way and takes a block out of the document. You must be careful what you delete as — unlike **The Last Word** from Saga Systems — you will not be able to recover the text unless you have a back-up copy already saved.

Write/Include is used when you want to move text from one file to another. You could, for instance, create a number of separate files containing addresses using the Write option, produce a standard letter to send to a number of people, and then use the Include option to place their names and addresses from backing storage, or RAM disc, into your current document.

The Write/Include option is more flexible than mail merge. You may have an almost standard letter, to be sent to several people, but with a different paragraph in each document. Just put the paragraphs into separate files and use the Include option to print different versions of the letter.

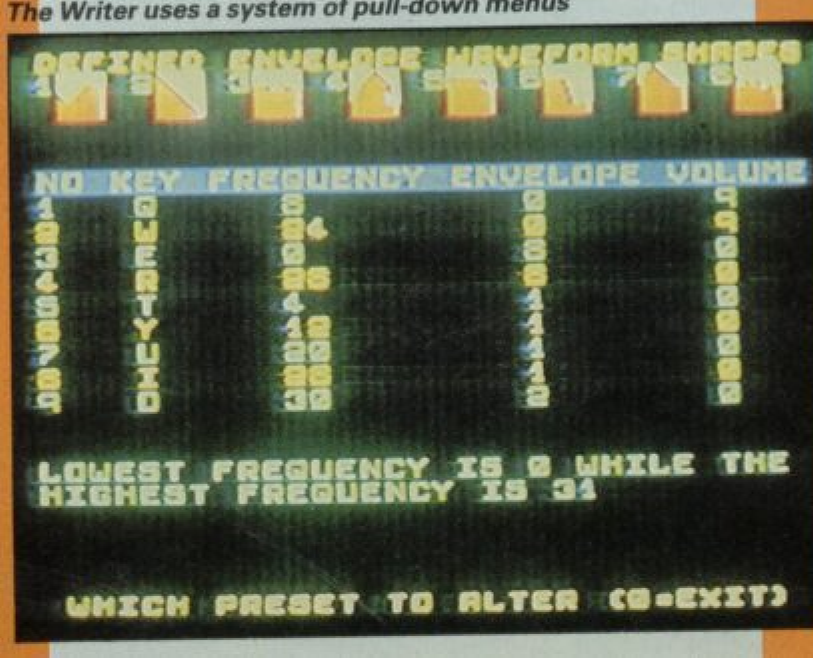
The Text menu defines the way in which text is put on the screen, together with margin and tabulation settings. Text can be centred, ranged or justified. Most text is ranged to the left which means that each line starts flush with the left margin. If you set 'range right', however, each line is set flush with the right margin.

Alternatively, you could justify the text in your document. Spaces are introduced into each line of text so that it fills the space between the left and right margins.

On some occasions, the

► 92

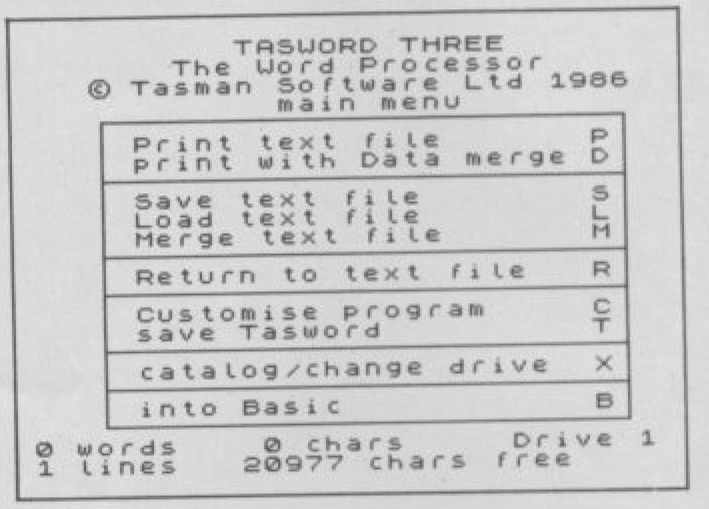
The Writer uses a system of pull-down menus



TASWOR

THE WORD PROCESSOR – A NEW STANDARD FOR TH







TASWORD TWO led the way in setting a standard for word processing on the ZX Spectrum. TASWORD THREE pioneers the new standard.

TASWORD THREE retains all the features which have made Tasword Two a household name for the Spectrum. With many additional features and enhancements, including a built-in mail merge and up to 128 characters per line, TASWORD THREE is the definitive word processor for the Spectrum and Spectrum+ with microdrive.

ZX SPECTRUM

TASWORD TWO

THE WORD PROCESSOR

TASWORD TWO for the ZX 48K Spectrum cassette £13.90 microdrive cartridge £15.40

"Without doubt the best utility I have reviewed for the Spectrum"
HOME COMPUTING WEEKLY APRIL 1984
"If you have been looking for a word processor, then look no further" *CRASH JUNE 1984*
With 64 characters per line on the screen and a host of useful features TASWORD TWO is the ideal cassette based word processing package for the Spectrum owner.

TASPRINT

THE STYLE WRITER

TASPRINT for the ZX 48K Spectrum cassette £9.90 microdrive cartridge £11.40

A must for dot matrix printer owners! Print your program output and listings in a choice of five impressive print styles. TASPRINT utilises the graphics capabilities of dot matrix printers to form, with a double pass of the printhead, output in a range of five fonts varying from the futuristic Data-Run to the hand writing simulation of Palace Script. A TASPRINT gives your output originality and style! The TASPRINT fonts are shown to the right together with a list of compatible printers.

TASMERGE

THE MAIL MERGER

TASMERGE for the ZX 48K Spectrum cassette £10.90

Transfer data from MASTERFILE to TASWORD TWO! Letters and forms typed on TASWORD TWO can be printed with addresses and data taken from MASTERFILE. The mail merge facility allows, for example, multiple copies of a letter to be printed, each containing a different name and address taken from your MASTERFILE data. To use TASMERGE you must have one or more microdrives as well as TASWORD TWO and MASTERFILE by Campbell Systems (version 9 or later).

TAS-DIARY

THE ELECTRONIC DIARY

TAS-DIARY for the ZX 48K Spectrum and microdrives. Cassette £9.90

Keep an electronic day-to-day diary on microdrive! TAS-DIARY includes a clock, calendar, and a separate screen display for every day of the year. Invaluable for reminders, appointments, and for keeping a record of your day. The data for each month is stored as a separate microdrive file so that your data for a year is only constrained by the microdrive capacity. TAS-DIARY will work for this year, next year, and every year up to 2100! Supplied on cassette for automatic transfer to microdrive.

TASMAN PRINTER

INTERFACE

TASPRINT PRINTER INTERFACE for the ZX Spectrum £29.90
RS232 Cable for ZX Interface 1 £14.50

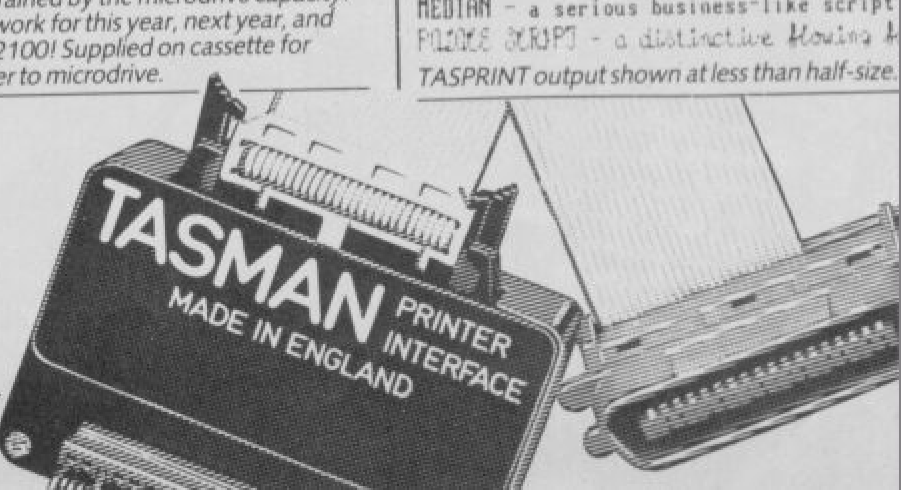
Plug into your Spectrum and drive any printer fi with the Centronics standard parallel interface. Supplied complete with ribbon cable and drivin software. The user changeable interface softwa makes it easy to send control codes to your prin using the method so successfully pioneered wit TASWORD TWO. The cassette contains fast machine code high resolution full width SCREE COPY SOFTWARE for Epson, Mannesmann Ta Shinwa, Star, Tandy Colour Graphic (in colour!) printers. TASCOPY shaded screen copy softwa this interface (value £9.90) is INCLUDED in this package.

The TASCOPIES and TASPRINTS drive all Epso compatible eight pin dot-matrix printers e.g.

		BROTHER M1009
AMSTRAD DMP2000	NEC PC8023B-N	BROTHER HR5
EPSON FX-80	MANNESMANN TALLY MT-80	SHINWA CP-80
EPSON RX-80	STAR DMP501/515/5610	DATAC PANTHER
EPSON MX-80 TYPE III	COSMOS-80	DATAC PANTHER II

COMPACTA - bold and heavy, good for emph
DATA-RUN - A FUTURISTIC SCRIPT
LECTURA LIGHT - clean and pleasing to r
MEDIAN - a serious business-like script
PALACE SCRIPT - a distinctive flowing h

TASPRINT output shown at less than half-size.



	Writer 128	Tasword III	Last Word
Mail Merge	✓	✓	✓
Word Wrap	✓	✓	✓
Standard phrases			✓
Access to Basic			✓
File chaining	✓	✓	✓
Onscreen Help	✓	✓	✓
Tabulation	✓	✓	✓
Scroll text window	✓	✓	
Undelete		✓	
Text file size (words)	5,500	3,000	4,000

89 ◄ You may have noticed that some word processors cannot cope with the speed at which you are typing. The computer is taking the characters and putting them straight on the screen. When it comes back to get another character you are already on a new sentence and it has missed several words.

To combat this problem of losing text Tasman has incorporated a text buffer into its program. The buffer continually takes in text at one end and is continually putting text onto the screen at the other. A quick typist will notice that text is still appearing on screen after typing is finished. Despite the buffer, however, I found it difficult to get ahead of the word processor's display.

The flashing block cursor, similar to the one used to edit Basic programs, posed a problem in **Tasword Two** because it obliterated the character you were typing.

The same type of cursor is used in **Tasword Three** but the program gives you the opportunity to change the rectangular block to another shape — such as an underline mark. Unfortunately, whatever character you use, the cursor still flashes and obscures any text beneath it. The cursor can also be changed to print characters in different pen colours, although with the television display text legibility is not increased by much.

All the usual word processor functions are included. You can set and clear margins — making the text any width across the screen. There is also a facility to search for words and phrases which can be changed to other words if required. If you want to change large chunks of your text you can insert blocks of text — sections made up of a varying number of lines — and copy blocks from one area of a document to another.

In addition to those commands, which are also included in **Tasword Two**, Tasman has added instructions which will copy blocks, lines and paragraphs. Also, you can unjustify text which is already justified, so that some lines are short and some long.

An unusual, but useful, feature calls back the last line you deleted into the line in which the cursor stands. For instance, you could have deleted 'I Love' but you could recall it into the phrase 'The Work movement' making it 'The I Love Work movement'

Another major innovation is the introduction of tabulation markers. Those are set at various points along the line and the cursor will be automatically positioned at the first when the tabulation key is pressed. Pressing that key again will send the cursor along to the next mark.

The Tasword tabulation settings are only left justified, so you cannot centre text on a tabulation mark.



For those of you who already have **Tasword Two** and **Masterfile** but want to upgrade, a program to convert **Tasword Two** text files to **Tasword Three** format, and a replacement for the **Masterfile** basic program, are included on the cartridge. On our copies the conversion program would not load, and apparently the first couple of hundred copies left out the address to load the code. If you find you have one of these Tasman can either tell you how to correct it or will replace it.

If there is a fault with **Tasword Three** it is that is has too many commands, especially for cursor movement. But that is unimportant when set against its features. With **The Writer** now on the market it is difficult to say it is the best available but what is clear is that it offers a highly professional word processor which more than holds its own. *Mike Wright*

Publisher Tasman Software
Price £16.50 **Memory** 48K
★★★★★

89 ◄ computer is unable to place a word at the end of a line and a decision is required from you. The word can either be split in two or you can invoke word wrap. If that word cannot be split, it is wrapped onto the next line and the previous line spaced to take in the gap.

The final option on the Text menu is Tabs which makes tables and columns of figures easier to design. A tabulation mark is a point to which you can move the cursor on a line of text. For instance, if you are typing out columns of figures, you can set **The Writer** to skip to the start of each column.

There are three types of tab setting; left, right and centred. The default tab setting is left. The tab marks are shown by an 'L' inserted in a line at the top of the screen. Pressing Break will send the cursor to the first tab setting on a line.

Right tabulation is different only in the way in which text is put onto the screen. When you start typing, the cursor remains over the tab mark and text moves towards the left margin, making each column right-justified. Central tabulation is, again, similar but the cursor stays where it is, and text moves out left and right to centre the heading or figures in the column.

The Search and Replace facility — which takes the cursor to a specified part of a document — finds the start of any word or phrase you want to locate within that document.

You may call a member of your staff Mr Lewis but want to change every reference to him to Andrew Lewis. Just type 'Mr Lewis' when asked what the search key is and the text with which you want to replace it.

The Format menu allows you to set up page numbers at the top or bottom of each page. You can print them in numeric, roman and alphabetic form but the default is numeric.

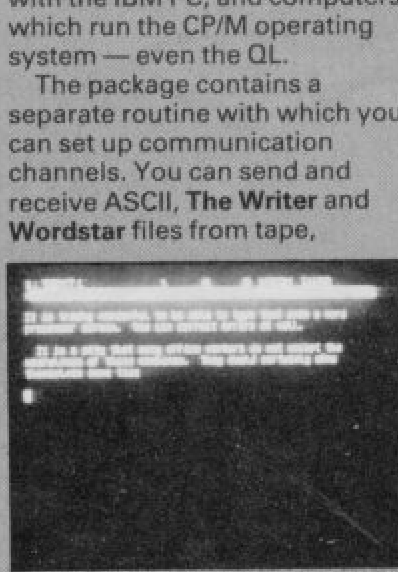
The Help facility is one of the most comprehensive of any Spectrum word processor, and works in a similar way to that provided with **Quill** on the QL.

You can obtain information on control keys, options which are available on a pull-down menus, control characters, installation, mail merge and communications. Each Help block is loaded independently from microdrive and usually contains two or three pages of information.

The main criticism of Help is that you must page all the way through a block of information. The only way to break out of the Help system when it's providing information is to crash the program and type RUN — that will get you back to the file you are editing.

The Writer can handle documents from several sources, for instance, text files from **Wordstar** — a word processor which is compatible with the IBM PC, and computers which run the CP/M operating system — even the QL.

The package contains a separate routine with which you can set up communication channels. You can send and receive ASCII, **The Writer** and **Wordstar** files from tape,



microdrive, disc or RS232. The RS232 link means you can link up several computers and share files between them. That gives **The Writer** a leading edge over all the Spectrum word processors available.

The communications routine, with its drop-down menu control system, is easy to use and you do not have to fumble around with program code to get printers and interfaces to work together.

A printer configuration package is also included with **The Writer** which makes the program compatible with Interface 1, Kempston, Hilderbay and Euroelectronics printer interfaces.

A wide range of type faces — including italic, bold, and double-sized — can be incorporated within your documents, and printed using Epson, Custom, Diablo and H80 printers. You can also build your own printer driver by answering a series of questions posed by the computer — all very easy to follow.

The Writer is one of the most complex word processors on the market for any machine, but the use of pull-down menus and the extensive Help facility makes it one of the easiest to use.

Softechnics can be justifiably proud of itself. **The Writer** not only has the standard features but many extras. Reviewing this program was like taking part in an exploration of the many ways you can present the printed word. It was an education. *John Gilbert*

Publisher Softechnics
Price £17.95 **Memory** 128K
★★★★★

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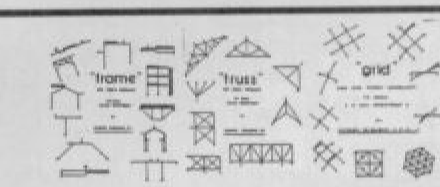
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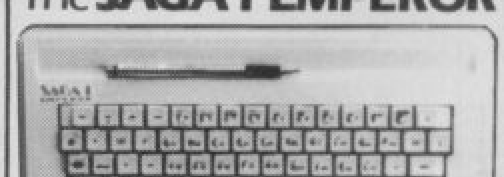
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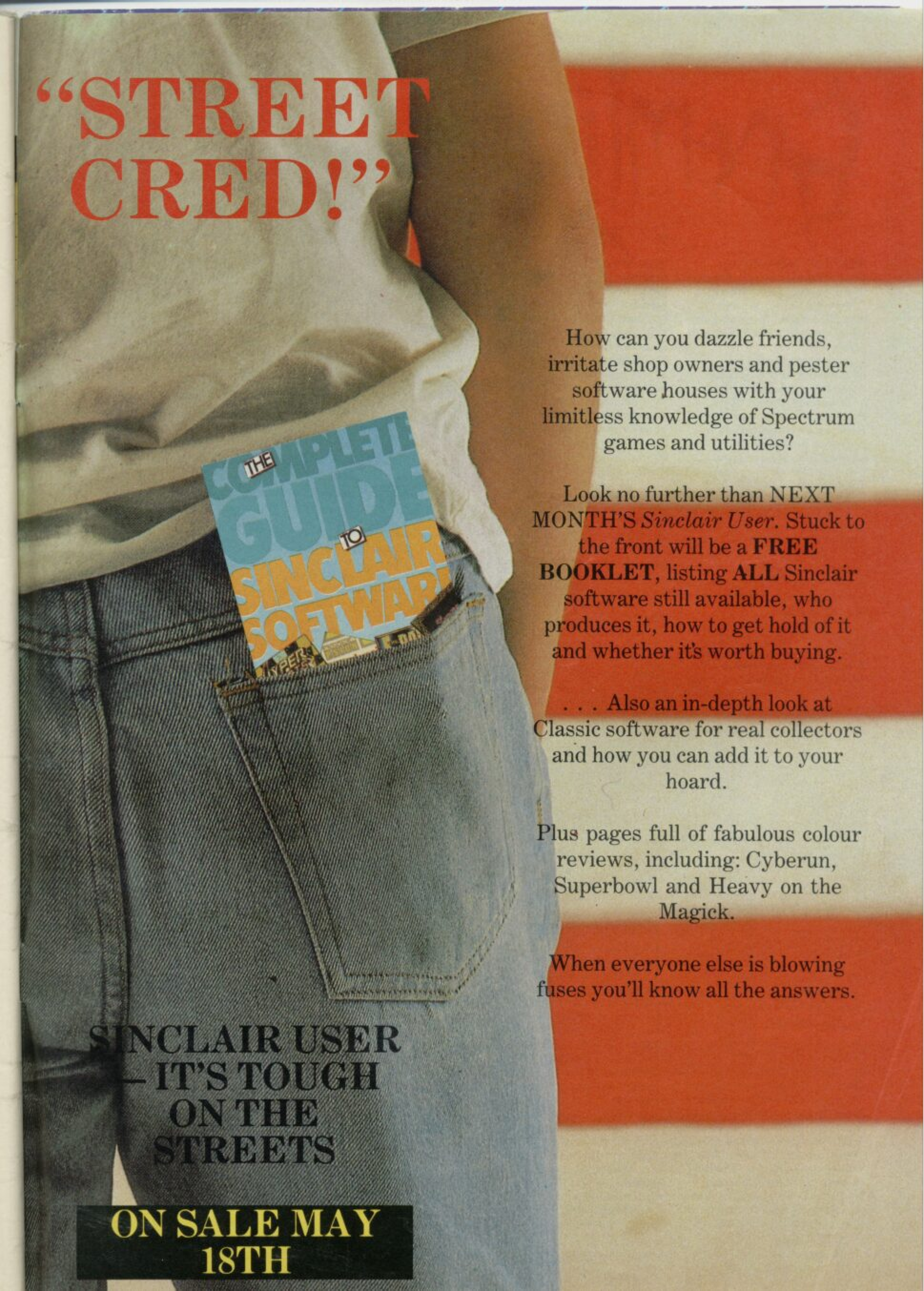
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Gremlin

HAPPY BIRTHDAY to you, happy birthday to you, happy birthday dear **Street Hawk** . . .

Yup, it's 12 months exactly since this disastrous non-game was first advertised in *Sinclair User*.

In that time **Ocean** has collared numerous **Scooby Awards** for delayed programs — **Supertest, Knight Rider, Frankie** and more recently, **Superbowl. Street Hawk,** however, puts them all to shame, and we have great pleasure in awarding Ocean the special lifetime Scooby for services to pre-launch hype.

Accepting the award on behalf of Ocean's **David Ward,** a mildly hysterical **Jennie Beattie** says: "Ocean will be adopting a policy of not advertising the games at all. **Green Beret** is the hat to wear. **Superbowl** is on its way to you now."

STOP PRESS: Ocean's programming supremo **Jon Woods** is now known as **The Fridge.** Does this refer to his habit of sacking quarterbacks who try to get a rise out of him?



Ocean's Jon Woods proudly shows off the *Superbowl* title screen. So where's the game, Jon?

Used car salesmen

Congratulations, too, to *Headbangers Monthly,* otherwise known as *Your Sinclair.* The slim publication carried the **Microsphere** ad for **Sam Cruise** — which you may have spotted in this rag as well.

The advertisement features a page from the classified ads of a Chicago newspaper, and the reclusive Microsphere people actually made an expedition to the British Museum Library to find a real '40s newspaper to copy. Imagine their pique when they saw what the headbangers did to their lovingly assembled artwork. Instead of picking out the **Sam Cruise** line with a red ring, they managed to pinpoint an ad for a **second-hand Studebaker.**

Microsphere has already received several offers for this non-existent car and, having discovered how much they are really worth, is desperately trying to find some. Perhaps Melbourne House's **Mugsy** can help . . .?

The Great Escape

Spring fever seems to have hit the offices of *Sinclair User* with drastic results — about half the staff are leaving. First to go is old incorruptible **Scolding** himself, and not before time, reckons Gremlin. Four years he's been associated with the rag, and what times they were . . . the **gipsy** cover of issue two, the infamous **Clumsy Colin Action Biker** review, those appalling long-winded **Sinclairvoyance** articles . . . these are just some of the low points of Bill's career.

He has had the good grace to remove his grubby corduroys as far away as Cornwall, where he hopes to cash in on all the favours he's done software houses by persuading them to let him design cassette inserts. Given the fate of software already sporting Scolding designs — **Mr Wong's Loopy Laundry, Aladdin's Cave** — you can only admire his nerve . . .

Stomach turning

Also leaving is that paragon of good taste and courtesy, **Chris** 'Lunchbreaks' **Bourne.** During his stay on the paper he has set new standards for depravity and kept at least five pubs solvent all by himself. Being insulted in a Lunchbreaks review is like being dive-bombed by a flock of mangy pigeons with weak bowels.

Indeed, the sight of Lunchbreaks stuffing himself with a meat vindaloo, lager dribbling down his beard, while simultaneously lecturing his colleagues on the delights of Greek folk music is an experience which will linger in our memories for years. At least



David White celebrates another impartial Saga review with the *Sinclair User* team. From left to right: Mr X, David White, 'WPC' Fanthorpe, 'Incorruptible' Scolding, 'Ligger' Edgeley, 'Disgusting' Gilbert and 'Lunchbreaks' Bourne.

one member of staff is already undergoing psychiatric treatment after being trapped with Chris for 15 minutes.

Chris goes now to **Micronet 800.** Gremlin is sorry for the staff over there, but at least they're used to being bored witless by electronic deadheads . . .

Original sins

Many thanks to all who wrote in with suggestions for the first smutty computer game. **Jonathan Knatt** came up with a bestial number for the BBC called **Pigman,** and many people sent cuttings of ads for **Cathouse Blues, Philly Flasher, Gigolo** and others by **Silver Fox.** Gremlin was sad that nobody could enlighten him about **Raquel's Game,** ads for which appeared regularly in the classified section of *Popular Computing Weekly.*

The grubby fiver goes, though, to **Steve Dickinson** who takes us back to 1982 and the very first issue of *Sinclair User.* What do we find? Good old **Automata** and those horrible games **Can of Worms, The Bible** and **Love and Death.** Some of the 1K wonders included were **Vasectomy, Smut, Sodom, Conception** and **Seduction.** Gremlin cannot delve further into the actual content of these games, but Steve clearly has a memory like a sewer . . .

Seasonal nonsense

News of three games which certainly wouldn't be eligible come in a press release from **Hardsoft — Seal Cull, Aids Alert** and **Motorway Maniac.** In the first you must 'club as many baby seals as possible' while avoiding Greenpeace. The second involves finding your way through a maze of public toilets, while the third is a tale of animated attacks on the hard shoulders of Britain's motorways.

The press release comes with three screenshots of blurred but highly offensive action.

If **Chris Jenkins** of *Commode Horizons* thinks Gremlin is going to fall for his little prank he can think again. The big question is, will Jenkins fall for Gremlin's? Better start checking all your stories again, boy . . .

Up front

In marginally better taste is **Martech**'s latest ploy, the production of a strip poker game supported, if that's the right word, by the talents of Wapping **Samantha Fox.** Press releases burble on about the artificial intelligence routines with great pomposity.

In fact, it seems Martech had no idea who La Fox is. Another press release has been received with some nudge-nudge copy about expanded versions and how 'we didn't realise just how popular Samantha Fox was'.

Many have attempted to sell games before by utilising the alleged charm of naked women. What is, of course, ridiculous, is that you don't need to fork out nine quid to see pictures of Sammy's whammies . . .

Trivia corner

A press release of such earth-shattering importance that Gremlin really cannot ignore it has arrived. **Tony Crowther** returns to **Alligata,** it says. Alligata therefore wins instantly the **Brazen Backslappers of the Month Award.**

It's a short piece, but contains an absolute gem — 'Tony's most creative period was whilst with Alligata in 1983-4'.

Gremlin always thought Tony's heyday, if it can be called that, was at **Bug-Byte** with programs like **Twin Kingdom Valley.** Unable to recall offhand what Alligata was up to in 1983, it becomes necessary to consult the oracle — **John** 'disgusting' **Gilbert,** whose memory for anything with the fabled Gilbert Factor attached is awesome.

"Alligata?" opines John. "They were so small an outfit I doubt if we even covered them." A million unsold copies of **Son of Blagger** — or a grubby fiver — to anyone who can name the first Tony Crowther game written for Alligata.

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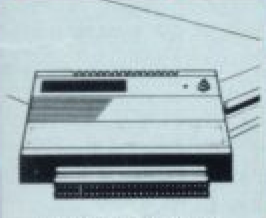
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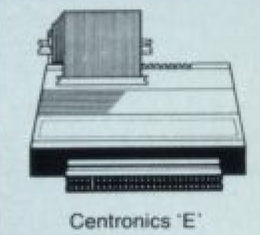
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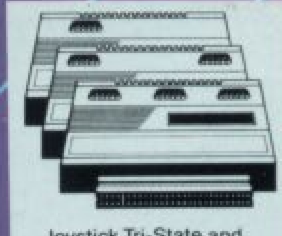
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